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ABSTRACT

This curriculum guide was developed to provide leadership information for educators of tech prep, school-to-work, and career development to develop programs that ensure equity for all students. The guide is divided into five sections. The Equity Awareness section offers a synopsis of the history and goals of equity efforts, ways to promote a general understanding of the issues, and suggestions to involve parents and the community. The Guidance and Counseling section provides strategies to prepare students to make sound career choices. The Staff Development section focuses on ways to involve all stakeholders in a process that must be ongoing. The Curriculum Development portion suggests ways of making changes that infuse equity into all aspects of the curriculum. Within each section are a variety of readings from many sources on the issue of equity in careers and career education. The last section provides additional resources, including the following: media catalogs, Internet resources for women's studies and address lists of the Tech-Prep Consortium, the School-to-Work Partnership, and New York State Teacher Centers. (KC)

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ED 416 404

Toward a Challenging Future

A Practitioner's Guide for Student Career Exploration in New York State

Equity Awareness 1
Guidance and Counseling 2
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Diane Donn, *School-To-Work Project Coordinator, Niagara County Community College*

Jack Fabozzi, *Tech Prep Technical Assistance Project Director, Two-Year College Development Center, University at Albany*

Craig Flood, *Director, New York State Career Options Institute*

Jennifer Gardella, *Team Leader, Fonda-Fultonville Central School District NOICC Project*

Ann Marie Haase, *Higher Education Opportunity Programs/VATEA, NYSED*

Marilyn Kelly, *Tech Prep Coordinator, O-H-M- BOCES*

Angela Lacara, *Tech Prep/School-To-Work Coordinator, Western Suffolk BOCES*

Mary Ann Luciano, *Catskill Regional Teacher Center Director, South Central Tech Prep Consortium (SUNY Delhi & SUNY Morrisville), Delaware-Chenango-Otsego School-To-Work Partnership, Southern Tier Teacher Center Network*

Pat Munroe, *Higher Education Opportunity Programs/VATEA, NYSED*

Patricia Pietropaolo, *Tech Prep Director, Finger Lakes Community College*

Barbara Ring, *Graduate Course Coordinator, New York State Career Options Institute*

Lynne Sheren, *Coordinator, Tech Prep Gender Equity/Gender Equity Programs, Orange County Community College*

Constance H. Spohn, *Tech-Prep Project Coordinator, Two-Year College Development Center, University at Albany*

Peggy M. Tyler, *Tech Prep Coordinator, Monroe Community College*

Jerald I. Wolfgang, *Director, Western Regional Education Center for Economic Development, Erie County Tech Prep Director*

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Introduction

About This Guidebook

Toward a Challenging Future: A Practitioner's Guide for Student Career Exploration was developed to provide assistance to those with a commitment to the inclusion of equity initiatives in Tech Prep/School-to-Work programs.

Tech Prep and School-to-Work are two truly innovative program efforts being implemented throughout the nation. Tech Prep represents an attempt to integrate applied academics with technical training efforts that help students acquire the background and abilities they need to enter the workforce, attain additional technical skills at technical or community colleges, or enroll in four-year college programs. A major goal is to provide students with a seamless curriculum as they progress from high school into college. School-to-Work represents a national effort to integrate learning with employment standards for **all** students K - age 24 whether in or out of school. School-to-Work focuses on both school-based and work-based learning opportunities emphasizing comprehensive partnerships of business, education and the community to better prepare all for the world of work. The Tech Prep/School-to-Work principles are consistent with the goals of educational equity: expanded choices and increased opportunities for all.

Toward a Challenging Future: A Practitioner's Guide for Student Career Exploration was developed to provide assistance to those with a commitment to the inclusion of equity initiatives in Tech Prep/School-to-Work programs. *The purpose of this resource is to provide leadership information for educators of Tech Prep/School-to-Work/Career Development activities. It can be used with teachers, administrators, students, parents, community groups and businesses and industries for enhancement of career opportunities and for the development of programs which ensure equity for all students and to help bring about far-reaching and lasting changes.*

The guidebook is divided into five sections: Awareness, Guidance and Counseling, Staff Development, Curriculum Development and Resources.

This guidebook is divided into five sections: **Equity Awareness, Guidance and Counseling, Staff Development, Curriculum Development and Resources**

The Awareness portion offers a synopsis of the history and goals of equity efforts, ways to promote a general understanding of the issues and suggestions to involve parents and the community.

The Guidance and Counseling section provides strategies to prepare students to make sound career choices.

The Staff Development section focuses on ways to involve all stakeholders in a process that must be ongoing.

Curriculum Development suggests ways of making changes that infuse equity into all aspects of the curriculum.

The last section provides additional resources, including media catalog, internet resources for women's studies and address lists of Tech-Prep Consortium, School-To-Work Partnership and New York State Teacher Centers.

Within each section you will find materials from a wide range of sources that graciously gave permission to reprint or adapt their materials. We hope that you will find this a useful and handy reference and that it will become a constant companion - one that you will share with others.

Dr. Peisheng Zhao
Project Director
Angela Prestigiacomo
Project Stafff Associate
Jennifer Godzwon
Project Research Assistant

Two Year College Development Center
University at Albany

Guidebook Overview

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How to Use This Guidebook

The Guidebook was developed to provide leadership information for educators involved in school, work and career education. A notebook style was chosen to allow you to add or delete materials as desired. It is hoped that your **entire staff** will have access to this guidebook and will be encouraged to regularly use the materials provided.

The guidebook was printed 3-ring drilled and shrink-wrapped. We strongly suggest that you transfer the guidebook to a binder for protection.

You need to insert dividers to separate the five parts of the Guidebook (Awareness, Guidance and Counseling, Staff Development, Curriculum Development and Resources). Table of Contents are provided for each section with subcategories listed. You may also want to insert dividers to separate these subcategories.

In using the Guidebook, please also note the following:

* The statistical information includes the most up-to-date data available. You may replace or adapt as more current information becomes available.

* Related bibliographies are found at the end of each main section. They are arranged alphabetically by **title**. These bibliographies as well as a number of other materials have been provided by the New York State Occupational Equity Center. Copies of the materials listed may be requested by contacting the Equity Center.

* In addition to the bibliographies listed in each main

section, a bibliography of the books and journals from which materials were reprinted can be found in the Resource section of the guidebook.

* Effective July 1, 1996, the Equity Center will become the **New York State Career Options Institute.** The staff, address and phone number will remain the same:

6 British American Blvd., Suite G
Latham, New York 12110-1402
Phone (518) 786-3236
Fax (518) 786-3245

* Assessment materials have been included. These materials can be found not only in assessment section but in other sections as well. You will find checklists or sample feedback sheets in each main section to aid you in assessing present programming and in determining program/project needs. In addition, some general information about assessment has been provided in the Awareness section of the guidebook.

The Guidebook can be used with and by teachers, administrators, students, parents, community groups and business and industries for enhancement of career opportunities and for the development of programs components which ensure equity for all students. Additional copies may be requested for the cost of printing by contacting:

Dr. Peisheng Zhao
Two Year College Development Center
University at Albany
135 Western Avenue, Husted 208
Albany, New York 12222

Phone: (518) 442-5590
Fax: (518) 442-5021
E-mail : twoyear@cnsibm.albany.edu
Or, Peisheng@aol.com

Toward a Challenging Future

A Practitioner's Guide for Student Career Exploration in New York State

Part One: Equity Awareness 1

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About Awareness

The term gender equity describes an environment in which girls and boys, women and men are given the tools to make choices based on their abilities and talent, not on the basis of stereotypes and biased expectations.

In **School-to-Work** Equitable Outcomes (WEEA Publishing Center 1995), gender equity is defined as "an environment in which girls and boys, women and men are given the tools to make choices based on their abilities and talent, not on the basis of stereotypes and biased expectations. The promotion of gender equity in vocational education involves creating an educational environment that allows students to choose from the gamut of vocational programs and careers, to enter those programs, to participate in them fully, and to benefit from them—all without regard to gender."

This section is designed to assist in developing such an environment. A better future for all students requires Tech Prep and School-to-Work initiatives to examine the current climate, to strive to foster a bias-free environment and to incorporate equity strategies in all phases of planning and implementation. A history of equity efforts, equity awareness checklists, sample activities, ways to involve parents and relevant articles are included in this section.

Early Equity Efforts

In 1984, the Carl D. Perkins Vocational Education Act provided a 3.5 percent set-aside within the basic state grant for sex-equity

The two main ways to achieve sex equity from the mid-1960's to the late 1970's were to comply with the letter of the civil rights laws and to conduct inservice workshops and conferences for teaching staff and school administrators. Occasionally, a program to serve specific groups of students -usually female - was used as an equity strategy.

Most activities were designed for educators and were short term in nature. The activities often focused on administrative procedures or encouraged educators to address sex-role stereotyping, bias and discrimination in their schools. While these activities helped increase educators' awareness and sensitivity to equity issues, such efforts failed to provide educators with the skills and knowledge needed to bring about widespread and lasting change.

In 1984, the Carl D. Perkins Vocational Education Act provided a 3.5 percent set-aside within the basic state grant for sex-equity purposes. For the first time a multiyear appropriation provided a resource that allowed educators to think beyond initial goals and methods to achieve sex equity.

Defining Sex Equity

Sex equity is freedom from favoritism based on gender.

Sex equity is freedom from favoritism based on gender. Achieving equity enables both women and men of all racial and cultural backgrounds to develop the skills needed in the home and in the paid labor force, and that suit the individual's informed interests and abilities. It also fosters mutual trust, as it allows people of both genders the freedom to fulfill many roles.

Sex equity actions are deliberate efforts to build partnership skills between men and women; enhance people's ability to work together productively; build stable and satisfying family relationships; expand career opportunities; and eliminate sex bias, sex-role stereotyping, and discrimination on the basis of gender.

Awareness of the need for equity has been heightened through changing economic and sociological patterns. Pressing economic and social needs, as well as the growing recognition of the negative impact bias has on both genders, have spurred efforts to achieve equity for women and men. A conscious and well-coordinated program to achieve sex equity can build trust and help meet the economic and social needs of individuals and society

Promoting Gender Equity in Schools

By acknowledging the conditions and striving to predict the future educators will be able to anticipate to a great extent the needs of students who are now in school.

Social and economic changes during the last 25 years have resulted in efforts to increase educational opportunity and eliminate discrimination. These changes require all educators to broaden their perception of the educational needs of male and female students of all races and abilities so that all students are prepared to survive and succeed in a society characterized by changing conditions and expectations.

Federal and state governments have created legislation to expand educational opportunities and to improve economic self-sufficiency for all people through changes in the educational system. Early equity efforts focused on removing overt barriers to equal access, treatment, and educational opportunity.

However, compliance with nondiscrimination laws and removal of overt barriers to all courses of study and occupations does not guarantee an environment of educational equity and expanded choices. Role stereotyping, bias, and lack of information about the impact of significant social and economic trends perpetuate old ways of thinking, feeling, behaving, and preparing for the future.

It is important to continually analyze the social and economic changes in the lives of women and men in our society. By acknowledging the conditions and striving to predict the future educators will be able to anticipate to a great extent the needs of students who are now in school. Even though it is impossible to predict the future precisely, educators should do all they can to help students deal with planning for self-sufficiency and success in adult life.

Girls Need To Know That

*Whether or not they marry or have children, they probably will be working for pay outside the home for most of their lives.

*They may be the sole support for themselves and their children or contribute significantly to the family's income.

*Unless they prepare for paid work by selecting and obtaining the necessary education and training for an occupation that interests them, they are more likely than males to be limited to low-paying, uninteresting jobs that provide little opportunity for economic self-sufficiency or advancement.

Boys Need to Know That

*If they marry, they may not be the only person in the family who works for pay outside the home.

*They are likely to share responsibilities in the home for cooking, cleaning, developing and maintaining healthy relationships, and caring for children.

*Sharing work inside and outside the home provides benefits for both males and females. Males have the opportunity to assume greater career risks and to work in areas that once were considered appropriate only for females.

All Students Need to Know That

*Many traditional ideals about work, leadership, and social roles are no longer realistic and are changing; both girls and boys can assume nearly any role if given adequate preparation and opportunity.

*Girls and boys should investigate the range of opportunities available and should prepare for a wide

variety of careers in a rapidly changing work world.
*It is their right to receive fair consideration and treatment in school and in employment.

To Build Commitment

Promoting sex equity in educational programs involves creating an environment that helps students free themselves of limiting gender-role expectations

Educators must be guided by evolving legal principles to implement equitable, nonsexist, and multicultural schools. Advocates of equity on the basis of gender, race, national origin, and handicap make similar efforts and should work to build linkages among their efforts as well as to facilitate collaborative action. The uniting goal of all equity efforts is to provide for the needs of all students.

To build commitment to equity, educators need to do the following:
*Help others move from the general to the specific. Many people are in favor of sex equity, but they need to know what concrete changes in behavior will promote it.
*Help others move from the individual to the systemic. Often, educators think that if they make changes in their own classroom or school, sex equity will be achieved. Widespread change is not likely, however, unless changes are made in policies, curriculum guides, systemwide programs, and elsewhere. Change must be accomplished in the classroom, the school, the district, the community, the state, and in the nation.

Promoting sex equity in educational programs involves creating an environment that helps students free themselves of limiting sex-role expectations and prepares them for future family and work roles.

The Goals of Gender Equity in Schools

* **To protect students' right** to an equal education free of discrimination on the basis of their sex.
* **To help students** free themselves from limiting, rigid, sex-role stereotypes and sex bias.
* **To assist students'** exploration of and participation in a

broader range of education programs and activities leading to:

- -greater educational achievement;
- -nontraditional, new, emerging, and technical occupations;
- -higher wage/higher benefit occupations leading to economic self-sufficiency especially for females; and
- -more satisfying occupations.

* **To help students** understand, consider, and prepare for the present and a future that is characterized by change, especially in male and female life roles, in relationships and in careers.

* **To educate students** about personal and social problems caused by rapid social and economic changes or stereotyped socialization of males and females, or problems that affect girls and women disproportionately.

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LEGISLATION RELATED TO SEX EQUITY

During the past twenty years, legislation at both the federal and state levels has been enacted to protect students and employees in educational institutions from discrimination on the basis of sex. These laws have set forth standards and procedures for ensuring nondiscrimination and have established programs designed to achieve educational equity for both females and males. Although overt examples of sex discrimination, bias, and stereotyping are less prevalent than twenty years ago, they persist in subtle forms and continue to suppress the abilities and motivation of both girls and boys.

FEDERAL LAWS

Title IX

In 1972, Congress enacted Title IX of the Educational Amendments Act, which prohibits discrimination on the basis of sex in any education program or activity receiving federal financial assistance. Title IX states "No person in the United States shall on the basis of sex be excluded from participation in, be denied the benefits of or be subjected to discrimination under any education program or activity receiving Federal financial assistance..."

The Title IX regulations were issued after much delay on June 4, 1975. The regulations state that, with certain exceptions, the law bars sex discrimination in any academic, extracurricular, research, vocational, or other educational program (preschool to postgraduate) operated by an organization or agency that receives or benefits from federal aid.

The exceptions include U.S. military schools, although such schools began admitting women in 1976; religious schools; Girl Scouts and Boys Scouts; YMCA, YWCA, and other single-sex youth service organizations; social fraternities and sororities; Boys' State and Girls' State; and father-son and mother-daughter activities.

The regulations are divided into the following six categories:

*general provisions

*coverage, admissions, treatment of students, implications for recruitment, facilities, financial aid, student rules, counseling programs, housing rules, health care and insurance benefits.

*scholarships and other recognition activities

*marital and parental status of students

*student employment, athletics, and other extracurricular activities

*course content, sexual harassment, single-sex courses, and school district provision of significant assistance to any organization, agency, or individual that discriminates on the basis of sex.

Title IX ***does not*** require or abridge the use of particular textbooks or curriculum materials.

By July 21, 1976, educational institutions were to comply with the following procedural requirements of Title IX. Educational institutions were to :

*appoint a Title IX coordinator to monitor compliance and to handle grievances;

*adopt and publish a grievance procedure for prompt and equitable resolution of complaints;

*provide annual notice of the district's compliance with Title IX to students, parents, employees, job applicants, unions, and other professional associations;
*provide a public notice of compliance with Title IX in a local newspaper;
*conduct a self-evaluation to determine where the district's policies or practices might constitute sex discrimination and to set forth remedial steps to eliminate the effects of sex discrimination within a three-year period; and
*file an assurance of compliance with the U.S. Office for Civil Rights (OCR).

In 1992, the U.S. Supreme Court decided, in a 9 to 0 decision, that individuals alleging discrimination under Title IX could sue for monetary damages (Franklin v. Gwinnet, 1992).

Office for Civil Rights Guidelines in Vocational Education

In 1979, the U.S. Department of Education issued the Office for Civil Rights Guidelines in Vocational Education. These regulations were the result of the Adams v. Califano case and, for the first time, required state educational agencies to establish a program to monitor local education agency compliance and to assist them in complying with Title IX (sex discrimination), Title VI (race discrimination),and Section 504 (handicap discrimination).

In addition to Title IX and the OCR Guidelines, Congress has passed several programmatic laws designed to promote and achieve sex equity in education. These include the Title IV Sex Desegregation Technical Assistance Grants, available since 1978; the Women's Educational Equity Act of 1974; the Career Education Incentive Act of 1977; the Carl D. Perkins Vocational Education Act of 1984, and the subsequent Carl D. Perkins Vocational and Applied Technology Education Act of 1990.

Title IV Sex Desegregation Technical Assistance Grants

Title IV Sex Desegregation Technical Assistance Grants stem from the authority of Title IV of the Civil Rights Act of 1964. Four kinds of grants originally were authorized; state education agency grants, local education agency grants (no longer available), regional desegregation assistance centers, and desegregation institutes (no longer available). A separate application and funding process for sex desegregation assistance grants was made available for the first time in 1978. Prior to 1978, many grantees provided technical assistance on Title IX compliance under the auspices of equal educational opportunity programs funded to address the multiple desegregation issues of race, sex, and national origin. In 1987, the U.S. Department of Education returned to the comprehensive grant award covering all three desegregation issues.

Women's Educational Equity Act of 1974

The Women's Educational Equity Act (WEEA) of 1974 was enacted to promote educational equity for women through a program of discretionary grants and contracts. WEEA was reauthorized and substantially revised by the Education Amendments of 1978. The program has two main grant categories. Grants of general significance are designed to enable educational agencies to meet the requirements of Title IX. The second grant program has never been funded.

From 1980 to 1988, federal funding for WEEA was reduced from $8 million per year to $1.9 million per year. WEEA established program priorities for model projects under the grants of general significance. They include Title IX compliance, educational equity for racial and ethnic minority women and girls, educational equity for disabled women and girls, projects to influence leaders in educational policy and administration, and projects to eliminate persistent barriers to educational equity for women and girls. Many educational materials and models designed to achieve greater educational equity for girls and women, from preschool to graduate school and in educational employment, have been developed with WEEA grants. (These materials are available from the WEEA Publishing Center; call (800) 225-3088 for a free catalog.)

Career Education Incentive Act of 1977

The main purpose of the Career Education Incentive Act of 1977 was to promote career education and infuse career concepts and connections in every educational program. One of the overall goals of the act was to eliminate sex-role stereotyping and bias from career education materials and programs. This program is no longer operating.

Carl D. Perkins Vocational Education Act of 1984 and its Successor, Carl D. Perkins Vocational and Applied Technology Education Act of 1990

The Carl D. Perkins Vocational Education Act of 1984 and its predecessor, the Vocational Education Act (VEA) of 1976, represent the most comprehensive efforts to date to infuse sex equity into an educational program. The act requires positive action to end bias and stereotyping as well as to ensure nondiscrimination.

The provisions of the Vocational Education Act of 1976 required for the first time that each state hire at least one full-time staff person to coordinate and infuse sex equity throughout the vocational education system. The law required state to provide incentives to local districts to encourage nontraditional enrollments and to begin to establish programs for special target populations, such as displaced homemakers. The law also required that advisory councils have a fair representation of females, males, minorities, and the disabled.

The Carl D. Perkins Act and its successor retained and expanded upon key sex-equity provisions of VEA. States are required to assign one person full-time responsibility for fulfilling seven mandated functions. The act provides two set-asides within the basic state grant; one for Single Parents and Homemakers (7.5 percent of the basic grant), the other for Young Women and Sex-Equity Programs (3 percent of the basic grant). Local school or vocational districts apply annually for these funds to implement programs for vocational education students. The intended long-term outcome of these programs is greater economic self-sufficiency for girls and women and to eliminate sex-role stereotyping, bias, and discrimination in vocational education.

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Links between STW and Gender Equity

The term *gender equity* describes an environment in which girls and boys, women and men are given the tools to make choices based on their abilities and talents, not on the basis of stereotypes and biased expectations. Such an environment brings about freedom from favoritism based on gender. The achievement of gender equity enables women and men of all races, ethnic backgrounds, and abilities to develop skills needed in the home and in the paid work force, skills that are best suited to an individual's needs, informed interests, and abilities. It opens economic, social, and political opportunities for all people. It fosters mutual trust because persons of both sexes are unrestricted in their roles. The promotion of gender equity in vocational education involves creating an educational environment that allows students to *choose* from the gamut of vocational programs and careers, to *enter* those programs, to *participate* in them fully, and to *benefit* from them—all without regard to gender. This concept needs to be expanded to nonvocational classrooms and work-based learning programs.

Gender Stereotyping and Career Expectations

Much of the early work in vocational education and nontraditional education addressed deeply held stereotypes about appropriate careers for males and females. Hundreds of programs around the country, supported by affirmative action and Title IX, pushed for the inclusion of women and girls in nontraditional careers. These careers—in the skilled trades, crafts, engineering, and construction—were opportunities for high-wage, flexible careers.

> It is rare for women to be actively excluded from vocational and technical programs or from the jobs themselves. Instead the status quo in recruitment, hiring, and job retention operates unintentionally to discourage women from considering these nontraditional careers.[8]

Similar concerns have surfaced about the participation of females in mathematics- and science-related careers. Mathematics and science are often the key to future economic and social well-being, opening the doors for careers in technology and many other high-wage professions. Unlike other nontraditional subjects, the need for advanced mathematics is now often an accepted reality for girls, their teachers, their parents, and future employers. Girls are taking more math and science classes in high school and are earning more degrees in related fields; but women are still not choosing mathematics and science careers. STW can help to correct this situation by building on the existing models for gender equity that have been developed in both nontraditional occupation (NTO) and math/science programs.

> If a woman ever wants to consider the option of self-reliance and true personal independence, she has to acquire practical abilities. Personally, the most tangible effect of my learning to work on cars, other than making more money, has been the confidence I have gained about doing tasks that would usually only be assigned to men, things like fixing a toaster, replacing a stove pipe, etc. There's a lot of freedom in that.[9]

Nontraditional career programs and math/science initiatives for girls also have lessons to share with STW about the impact of gender-role stereotyping. Gender-role stereotypes on the part of students, teachers and counselors, parents, employers, and work colleagues have long played a role in determining whether students see a career as open and inviting or as unattainable and hostile.

Expectations that certain careers—such as construction, mathematics, or bioscience—are "for boys" whereas other careers—such as teaching, nursing, or administrative support—are "for girls" are often unconscious or unspoken. However, they continue to shape the teaching and counseling methodologies of schools, guide parents to push boys into mathematics and science, and shape a workplace culture that does not support women in their dual roles as workers and parents.

This dual role most women play is often unrecognized by employers, colleagues, teachers, and counselors. But it is often a major consideration on the part of women and girls as they make career choices. Despite significant participation in the workplace, women are still expected to be the primary nurturers within the family.

> I think women need to consider nontraditional occupations if they are ever to have any real political power. High-level decisions are made these days on the basis of technical advice, whether about energy projects or production levels in industry. You can't take a whole group that is ignorant of technology and expect them to have much power or influence on these vital questions.[10]

The expectation that this "women's work" should not affect work continues to guide the structure in the workplace as well. Women must often choose between jobs that pay less but offer the flexibility to be home with children after school (since few affordable day-care options exist) and jobs with better pay that require significant involvement, but risk penalties. In addition, the lesson of custody hearings in which ex-husbands sought (and gained) custody of their children by claiming that the mother was working too much has not been lost on women and girls.

These messages continue to tell women that the workplace and society frown on their full participation. Until we begin to change the expectations not just of female students but also of their male counterparts, teachers, counselors,

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and employers, no program will change the economic reality for most women. The workplace must also change to reflect the changing needs of workers and become both supportive of women and "family friendly."

Equity Guidelines for STW

The key to understanding the implications of gender equity and equity for all students within STW is to build a dialogue within the STW community incorporating the rich expertise and experience of work in nontraditional occupations, math and science for girls, and other equity programs. As states and communities begin planning and implementation, equity specialists can raise a series of key questions to help infuse equity into the process, such as the following:

- How can we help ensure that all students in the programs are *provided with options leading to productive and rewarding futures?* What does it mean to say that STW is for all young people? Is it designed to help all students? How does STW use career exploration for all students? How do we ensure that STW explores professional careers, offers career ladders, and broadens the concept of work for all?
- *How do we ensure equal access to STW?* What do student demographics tell us about who is recruited, and to which programs? What is the retention and success of individuals in a specific grouping—European American males/females, African American females/males, Hispanic males/females, students with disabilities, and so on? Who is going on to community college, technical college, or university?
- *How are programs conducted?* Is the program structured on the basis of proportional representation of all groups found within the school community? If not, how can this be corrected? Does it offer a career ladder option and a college option? How are students supported in the program? Does it include training on the "right to know" law? Does it have policies and procedures regarding sexual and racial harassment in both school-based and work-based components? How are workplaces supported and monitored to encourage equity? What adjustments need to be made to involve students with disabilities? How are the needs of students whose first language is other than English addressed? How does the STW program reach out to and include the active participation of parents?

Source: School-to-Work Equitable Outcomes. Newton, Mass: WEEA Publishing Center/EDC, 1995.

Administrator's Guide to Bias-Free Classrooms

Career, Education, & Training Associates, Inc. has published a series of materials aimed at eliminating gender bias and stereotyping in vocational and applied technology education. The booklet format and the clear, targeted information provided make this series a valuable resource. An outline of the ten publications available, as well as ordering information, is found in the Resource section of the guidebook.

The **Administrator's Guide to Bias-Free Classrooms: Building Bias Free Learning Environments** contains the following sections:

I. Sex Equity: What Is It? Why Is It?
Explains why administrators must make gender fairness for all students a top priority in vocational education programs.

II. Activities and Tools
Six tools or activities are provided that can be used individually or in small groups to help provide awareness for gender equity with a school staff or students. **These activities are found in the Staff Development section of this Guidebook.**

III. Suggested Strategies for Administrators
Suggested approaches that administrators can use to develop and maintain gender equity within the school and the district.

IV. Support Materials

These easy-to-use materials, published in 1993, are a good addition to the practitioner's equity resource library.

Administrator's Checklist

For successful removal of barriers to equity for all students, it is necessary to:

- focus awareness on the problems of inequity
- provide preservice and inservice education to correct instruction
- modify the curriculum
- develop innovative teaching/learning material and techniques
- provide facilities and equipment
- implement comprehensive programs of career education
- collaborate with the community for placement opportunities
- provide role models for nontraditional positions
- fund educational programs at an adequate level

Administrator's Guide to Bias-Free Classrooms
Career, Education, & Training Associates, 1993.

Administrative Strategies for Achieving Sex Equity

Administrators can promote equity in several ways. They can:

*recognize equity as an important issue and actively plan for it;
*develop and implement sex-equitable policies;
*plan for and support staff development activities related to equity; and
*establish a school climate that promotes excellence in education, including equity for staff members, students, parents and the community.

Administrators can use the following strategies to promote sex equity at the college, district and school levels:

1. Identify what has already been done to promote equity.
2. Develop policies, procedures, and guidelines that specifically plan for equity.
3. Establish objectives, activities, and a timeline for activities that increase nontraditional enrollment and staffing patterns.
4. Analyze enrollment and staffing data by sex and by course to identify trends and possible intervention points.
5. Provide inservice programs on equity issues for all staff. These may include topics on current work statistics; family trends; and how to provide for a sex-equitable classroom using appropriate materials, curriculum, language, instruction, and beliefs.
6. Offer bias-free classroom technique suggestions in teacher evaluations, especially in courses where enrollments are predominately male or female.
7. Use staff meetings and other staff communication channels to build awareness and support for equity.
8. Actively plan to recruit men and women for nontraditional teaching and administrative positions.
9. Promote sex-equity issues with parents and community members through newsletters, school board members, and advisory meetings.
10. Develop a plan to review classroom, library, and guidance materials for evidence of sex bias and to modify them where appropriate.
11. Organize curriculum revision projects that redesign program content and activities to make them appropriate for both males and females and to prepare students for expanding and changing roles of men and women.
12. Offer opportunities that encourage students to explore non-traditional options and familiarize them with language and equipment of the area.
13. Design the master class schedule so it encourages enrollment by males and females in every class. For example, a traditionally female class is not scheduled at the same time as a traditionally male class.

Source: Programming for Gender Equity by Dr. Bette J. Soldwedel, University of North Florida, 1995. Permission from Wisconsin Department of Public Instruction.

A SIMPLE NEEDS ASSESSMENT

Periodic review of the kind of career development experiences your district or institution offers to students will help identify areas that need further study or corrective action. The following checklist of activities and strategies for expanding options for ALL students will help you get started.*

ARE THESE PRIORITIES IN YOUR DISTRICT OR INSTITUTION?

☐ **Staff awareness of statistics** related to single parenting, the need for women to work, and the balancing of work and family. Do teachers and guidance counselors know that the majority of their students will have to work for 34-44 years?

☐ **Faculty workshops on** career development and equity issues such as nontraditional careers for women, math as a career filter, pre-employment skills, and labor laws that are nondiscriminatory.

☐ **Posters and brochures** that promote a full range of career options for both boys and girls. What are women and men doing in the pictures on the guidance counselor's bulletin board?

☐ **Information for students and** parents about the significance of the quantity and difficulty of math courses as the route to high wage jobs. Do teachers know that math is critical for almost any job?

☐ **Internships, job shadowing,** and workplace tours for both boys and girls, with nontraditional role models.

☐ **Visiting speakers** who are in fields of the future and nontraditional for their gender. Have the students met a female CAD-CAM specialist, cable splicer, or draftsperson? Have they heard male nurses discuss why they entered a nontraditional career?

☐ **Support during apprenticeships** and on-the-job training programs in environments that are dominated by adults of the other gender. Are counseling, child care, transportation, support groups, and additional training provided?

☐ **On-the-job placement** opportunities for teen parents, alternative education students, and other special population students.

☐ **Emphasis on applied academics** in vocational education classes. Are pre-employment skills such as problem-solving, decision-making, and customer service taught as part of the curriculum to both boys and girls?

☐ **Clear intolerance of sexual** harassment in career programs. Is there teasing of a girl wearing a hard hat, and name calling of a boy in a nurse's lab coat? What intervention and education is done to eliminate harassment?

☐ **District protection of students** from sexual harassment when they are participating in work-based career activities. Do local business contacts have a sexual harassment policy?

☐ **Encouragement of boys to** participate in volunteer activities at not-for-profit agencies. Is it assumed that only girls will have the time and inclination to volunteer when they are adults? Are boys encouraged to volunteer in fields that require caretaking such as child care centers and nursing homes?

☐ **Job placement programs** that teach both boys and girls about professional demeanor at work such as proper dress, punctuality, teamwork, and attendance. Do students see the relationship between expectations at school and similar expectations at work? Are boys prepared to work for female bosses, and are girls aware of the concept of the "glass ceiling"?

☐ **Job placements** that are based on skill and interest, not on gender.

*Reprinted with permission from Take A Good Look: A Gender Equity Handbook for Administrators. New York State Association for Women in Administration.

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Considerations Prior to Implementation

Before starting the implementation phase, consider the following advice from Amanda Smith in her book *New Pioneers: A Program to Expand Sex Role Expectations in Elementary and Secondary Education.* The original text has been changed or expanded upon to accommodate the issues, concepts, and language used in this publication.

1. Equity is not simple and not concrete. Some people may believe it is and will approach actions from that perspective. There must be time for people to process the change that equity issues may present to them.

2. Start with problems people know they have. Begin by identifying equity problems people may not have identified, asking whether they, or others in their school, might welcome a new approach to

* student achievement.
* math avoidance for girls.
* loss of talent where students of either sex avoid or are channeled away from inherent abilities.
* work poorly done where either boys or girls are pressed into work for which they are unsuited.

3. Build on existing work, such as staff development, and infuse equity concepts throughout existing work. Try to avoid approaching equity as a new task or initiative.

4. Look for opportunities. As you work with people, try to identify their concerns and then discover whether there are any opportunities in the interest area and professional specialty for helping people build equity-related competencies (for example, leadership development for principals or effective teaching techniques for educators). Seeking such opportunities is a positive approach with wider application than simply trying to eliminate bias.

5. Consider that people approach equity with differing views. Welcome and use controversy and sex-biased comments to get ideas out in the open, allowing them to process issues, feelings, and perspectives. As people express differing views, including anger, validate their feelings. Avoid taking their feelings personally. Involve the group whenever possible to allow them to process change and see another point of view.

6. Distinguish between sex discrimination and sex bias. Discrimination is defined as that which is against the law. Anything illegal must be obvious, because you have to be able to prove it happened. Discussion of the law should be limited in duration but sufficient to make clear people's legal responsibilities and rights.

Bias is the unconscious underlying network of assumptions that say men and women are and should be different, not only physically, but also in their personalities, abilities, and occupations. We are all biased, even those of us paid not to be. Only a few of us intentionally discriminate.

Understanding bias leads to understanding how we unconsciously shape our students and ourselves. We can analyze how we bend other people out of shape to meet our preconceptions. We also learn to develop positive traits, such as independence in boys and nurturance in girls, that can be extended to everyone.

If bias is understood, it is likely people will see equity more positively. If they are given a "this is the law approach" they may fight every effort. Therefore, leap-frogging over discrimination to deal directly with bias may in the long run be the most effective way to comply with the law.

7. Understand first, act later. Never assume everyone shares, or even understands, the goal of equity. Discussion of sex bias— where it comes from, how to recognize it, how pervasive it is, what it does to people— should precede any effort to develop or commend specific practical strategies, or to persuade anyone to begin to take any sort of action. Remember that every member of your audience is a person first and a professional second, and that the issues you are discussing hit close to home in one way or another on a personal level. Pushing specific activities in an effort to "keep it simple" before misgivings are allayed may be perceived as "coming on too strong." In any given session, provide information first, then allow time for reaction, questions, and anecdotes. Starting with discussion may reinforce previously held stereotypes. Keep work in the context of a planned approach to locally identified needs.

8. Keep a balanced approach. Include both males and females as leaders in discussion examples and on presentation teams. Illustrate points with anecdotes about both sexes or alternate female and male examples.

9. Never laugh at anyone. Fears of integrated rest rooms, lost femininity, or boys growing up homosexual if they play with dolls are real fears and should be answered seriously. Religious questions especially must be treated with respect.

10. Laugh as much as possible with others and at yourself. Use humor to help build commitment and allow people to work through feelings and concerns on equity issues.

11. Portray a positive view for promoting positive actions. Try to avoid the negative and the nonaction orientation. Provide something for participants to take with them, such as a handout, resources list, or activity.

Reprinted/excerpted with permission from Bitters, B. A. and Foxwell, S.,
Wisconsin Model for Sex Equity in Career and Vocational Education,
Wisconsin Department of Public Instruction,
125 South Webster Street, Madison, WI 53702; (800) 243-8782

Three Steps to a Gender Fair Climate

1. *Be aware of the inequalities that exist and of their effects.*
2. *Understand the myths and realities of gender equity.*
3. *Take action to overcome the inequities and encourage gender fairness.*

Institutional Support

- Portray both females and males in nontraditional as well as traditional roles in all promotional and educational materials.
- Plan student activities that help female and male students work together cooperatively.
- Make sure all students have equal access to facilities, including washrooms, changing rooms, lockers, athletic equipment, etc.
- Remove any materials that are offensive or that show disrespect for one gender or the other.
- Encourage faculty to exchange bulletin board space to inform students of other vocational and academic areas.
- Create bulletin boards using gender fair language and nontraditional careers.
- Use time at regularly scheduled faculty, department, and guidance meetings to increase awareness of gender equity.
- Offer workshops and inservice for faculty and school personnel in a progressive and sequential fashion that addresses gender equity issues.

Often Overlooked But Very Important Noncertified Staff

- Aides, cafeteria workers, custodians, bus drivers, and secretaries are often overlooked as important contributors to school climate concerns. Their frequent interactions with students convey important messages about school values. Include noncertified staff in inservice activities.

Source: Carelli, *Administrative Policy, Sex Equity in Education*, 1988

Social-Educational Climate and Barriers to Gender Equity

There exists a broad range of subtle behaviors and events that perpetuate inequities in education. These subtle barriers--verbal and nonverbal behaviors--discriminate unintentionally as well as intentionally. It is important to educate administration, faculty, and staff as to how subtle discrimination expresses itself in both verbal and nonverbal communication. The following barriers can apply to administration, faculty and staff and student:

Exclusion: Unintentional and intentional oversights denying access to programs, activities, and facilities

Role stereotyping: Expectation of behavior that conforms to sex role stereotypes and traditional course and career choices

Double standard: differential evaluation of behavior as a function of gender

Condescension: The apparent refusal to take persons seriously as students or colleagues, communicated through posture, gesture, and tone of voice.

Sexist comments: Expressions of derogatory beliefs, such as women are a "distraction", male nurses are "sissies"

Hostility: Avoidance, expressions of annoyance, resentment, anger, and jokes and innuendoes at the expense of the minority gender

Denial of status and authority: The covert refusal to acknowledge a woman's position or her scope of authority such as bypassing female department chair to report to her superior

Invisibility: The failure to recognize the presence or contributions of the"other" gender (for example in course content)

Tokenism: The discretionary inclusion of one or only a few of the minority gender

Divide and conquer: The use of tactics that maximize the social distance of women from each other such as informing a woman that she is superior to other women in ability or achievement

Backlash: The rejection of women and men who support efforts to improve the gender fair climate in the educational institution

Adapted from *Improving Sex Equity in Postsecondary Education*, Handbook for Achieving Sex Equity through Education, Susan S. Klein Ed., 1985

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School Climate

LOOK FOR:

☐ **Posters, pictures, and decorations in the school.** Do these visuals emphasize the importance of diversity and expanded options for students? Are there pictures of men *and* women in leadership roles, solving problems, and taking risks?

☐ **Pre- and in-service programs that assist the staff in overcoming gender bias.** Are training programs offered that teach administrators and teachers how to promote equity?

☐ **The authority and knowledge base of the Title IX Coordinator.** Does this individual have real power? Who determines the budget, projects, and guidelines? What support does the Coordinator have when pursuing grievances?

☐ **The use of bias-free language** by school district employees and students, without demeaning or objectifying women. Are teachers reacting with "boys will be boys" or "he's just teasing you"? Are girls told how to demonstrate intolerance? Are girls aware of how they may be perpetuating bias about men and boys?

☐ **A clear policy related to sexual harassment,** including step-by-step grievance procedures. Check for dissemination of the policy to all staff, students, parents, and new families in the district. Are offensive jokes told/posted by staff members or students and tolerated?

☐ **Efforts to eliminate stereotyping of boys and girls through curriculum and instruction.** What bias-free materials are displayed for student use? Are females expected to be quiet and docile while the boys are encouraged to be assertive and boisterous? Do you see the girls taking on a passive role when boys are active?

☐ **Levels of dependence and independence** in the classroom. Do the adults do things for girls while allowing boys to do things for themselves? Does this lead the girls to continued dependence on the teacher?

☐ **The gender of volunteers** for technical tasks such as running audio-visual equipment. Encourage boys and girls to work together to become VCR and computer "experts".

LOOK FOR:

- ☐ **Equal enforcement of rules.** Is it assumed that boys will test and break the rules and the girls will behave themselves?
- ☐ **Attendance and planning for all school events, awards, and programs.** Is the diversity of the school community represented and recognized?
- ☐ **Assembly coordinators and speakers.** Who is in charge? Who is doing the work? What do the pep rallies sound and look like?
- ☐ **Duty assignments** for school personnel such as hall patrol, parking lot supervision, and recess supervision. Are assignments based on assumptions about whether men or women should supervise, rather than on the training and effectiveness of *individuals*?
- ☐ **Office assistance and other student duties** — male or female?
- ☐ **Both male and female school personnel** who can work towards equity. Is it assumed that males are not committed to gender equity?
- ☐ **Encouragement of participation in workshops and conferences on gender equity, non-traditional careers,** and other related topics. Is gender equity always addressed during Superintendents' Conference Days regardless of the theme of the day? The message of equal opportunities for all students can be included in topics on school safety, authentic assessment, curriculum frameworks, and other issues that are discussed during staff development programs.
- ☐ **Expression of emotions** by students. Are both boys and girls encouraged to seek assistance from adults and to talk about their feelings? Is it assumed that boys are more aggressive than girls, or that girls cry to get their way?

Source: Take a Good Look--A Gender Equity Handbook for Administrators. NYSAWA, 1995.

Gender Equity: A Necessity

1. **Personal development**

   To give all people equal opportunities to develop their individual interests, abilities, aptitudes, and talents

2. **National educational system**

   To give all students equal opportunities to develop their individual interests, abilities, aptitudes, and talents

3. **National economy**

   To give all workers the opportunities to develop their individual interests, abilities, aptitudes, and talents

4. **International economy**

   To give America opportunities to compete in global markets

To do any less is to deprive our country's citizens of their rights and our companies of a productive work force. Gender equity is essential to the health of America's people as individuals and to our industries as global competitors.

Myths About Gender

What are the myths associated with equality of the sexes?

Myths about the differences between men and women

a. Men are physically, intellectually, and emotionally superior to women.

b. Men are to lead in all of the important activities of life; women are to support them.

c. Men are to act like men; women are to act like women.

Myths about women in employment

a. Women are too temperamental to do "man's work."

b. Women are too weak to do "man's work."

c. Women distract men from their work.

Realities About Gender

What are the realities regarding the equality of the sexes?

Research finds little evidence of "natural" sex differences in the intellectual and social skills of males and females that affect performance at school or at work.

Attempts to prove that intellectual and social skills are genetically determined have failed because scientists cannot remove environmental differences that begin at birth.

Even though no differences that affect academic achievement or employment performance have been found, women have historically been regarded as inferior to men.

Role expectations and differentiated treatment of the genders permeate homes, schools, and places of work.

Source: **Gender Equity. CIMC Oklahoma Dept. of Vocational & Technical Education.**

School-Community Relations

LOOK FOR:

- ☐ **Nonsexist language** in newsletters and other written correspondence for parents and community members.
- ☐ **Equitable representation of females and males in photographs and graphics** used for news releases, television spots, program brochures, and the like. What would a review of the last five publications reveal?
- ☐ **Inclusion of gender equity issues in adult or community education programming** in the district. Do adult education initiatives attend to what parents can do to minimize sex-role stereotyping at home?
- ☐ **Public relations programs** to inform community about gender equity policies, issues, and legislation. Invite non-traditional role models (such as women engineers, plumbers, and doctors) to speak to parents about options for girls.
- ☐ **Utilization of services** of community groups that are supportive of gender equity efforts.
- ☐ **Nurturance of relationships with public officials** of both sexes. Have female political leaders been invited to speak to students about their decision to run for office?
- ☐ **Efforts to achieve gender balance within parent-teacher association** membership and leadership. Do these continue to be all-female organizations in your district? How can more fathers feel welcome and become involved?
- ☐ **Spokespersons of both sexes** when conducting informational or open forums for the public.
- ☐ **Disaggregation of public opinion data by sex**, to see if identifiable patterns emerge. Are both men and women in the district concerned about the status of girls and technology in the district? What public education can follow the study?

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LOOK FOR:

- ☐ **Coordination of parent/community volunteers and guest speakers, so that students gain exposure to role models of both sexes.**
- ☐ **Staggered schedules so that parents can attend school programs. Are parent-teacher conferences offered in the evening?**
- ☐ **Adequate facilities and staffing of child-care arrangements for community participants in school-site councils, district committees, and other public events.**
- ☐ **"Parent Volunteers" instead of "Room Mothers" at the elementary level.**
- ☐ **Recognition programs and performances which feature gender-balanced participation by students and staff. Are award ceremonies balanced in terms of presenters and recipients?**
- ☐ **Advertisements of school events for guardians, household members, and guests of students, rather than exclusive focus on mothers or fathers, or "head of household."**
- ☐ **Involvement of parents and community members in evaluating the schools for gender equity. Third-party perspectives can be useful in gaining fresh insights about what we take for granted in schools.**

Source: Take a Good Look–A Gender Equity Handbook for Administrators. NYSAWA, 1995.

FACTS FOR PARENTS

Did You Know:

To Guide Your Children to Success in the Year 2000 Through Career Planning and Vocational Preparation

- A female graduating now probably will be part of the work force for more than 30 years—whether or not she marries or has children.
- A male graduating now probably will be in the work force for more than 40 years. If he marries, his wife probably will have an important share in the economic support of the family.
- More women are entering the trades and technical fields, while men are beginning to choose nurturing professions such as nursing and teaching in primary schools.
- Most work can be done by people of either sex who prepare and train for it.
- The law is on your child's side. It is her or his legal right to receive fair consideration for any job or training program for which she or he is qualified.

Parents, We Can Make Sure Our Children Have the Facts:

We can make sure that our daughters and sons know the negative effects stereotyping can have on their lives and the ways that they can overcome stereotyping.

- That our daughters understand that they probably will be working for pay outside their homes for a significant portion of their lives.
- That our sons realize that, if they marry, they probably will be married to women working for pay outside their homes and that they will need to contribute to or be responsible for caring for children, for the home, and for family needs.
- That our daughters and sons recognize the variety and range of paid work available to them, as well as the duties, requirements, and pay that accompany various jobs.
- That our daughters and sons are aware of the educational programs that can help them to choose and prepare for rewarding work, both outside and inside the home.
- That our daughters and sons know the negative effects stereotyping can have on their lives and the ways that they can overcome stereotyping. In the past, some jobs have been

primarily male or primarily female and have limited children's career choices.

Vocational Programs in Your School Provide for Both Girls and Boys to Learn About:

All vocational programs are open to male and female students because career choices should be based on interests and ability, not tradition.

- their interests and abilities.
- tomorrow's jobs.
- computer applications.
- work and families.
- how to get and keep a job.
- how to be a leader through belonging to a vocational student organization.
- the skills necessary for entry-level employment.
- education and job training opportunities beyond high school.

For more information, contact your high school guidance counselor.

Adapted from Cooperative Educational Service Agency 10, 725 West Park Avenue, Chippewa Falls, WI 54729; (715) 723-0341

Parent's Guide to Bias-Free Career Planning

Career, Education, & Training Associates, Inc. has published a series of materials aimed at eliminating gender bias and stereotyping in vocational and applied technology education. The booklet format and the clear, targeted information provided make this series a valuable resource. An outline of the ten publications available, as well as ordering information, is found in the Resource section of the guidebook.

The **Parent's Guide to Bias-Free Career Planning: Helping Students to Create Options** contains the following sections:

I. Introduction
An explanation of the influence parents have on both the educational opportunities provided by public schools and the home environment of their children.

II. Know the Law and How It Can Help You
The rights provided in the Title IX of the Educational Amendments of 1972.

III. What is the Status in Your School?
Examples of issues, teacher language, course selection, teaching materials and classroom activities, and helpful tips for parent to use around each issue.

IV. How Can You Promote Better Sex Equity in Your School?
Suggests actions to assist parents in taking a more active role in promoting equity in schools of their children.

V. What About Your Home Environment?
Since parents can, by actions, examples, and expectations, unknowingly affect children's sex-role development, tips are provided to improve equity modeling in the home. **These tips are listed on the following page.**

These easy-to-use materials, published in 1993, are a good addition to the practitioner's equity resource library.

We can help our children develop a positive self-concept and become fulfilled individuals by:

1. Teaching our children that boys and girls can do all the same things.
2. Sharing in the day-to-day child care such as feeding, dressing, putting children to bed, escorting them to and from school, and taking care of sick children by both mother and father.
3. Increasing your son's participation in more domestic tasks such as cooking, shopping, and cleaning.
4. Helping your children realize that they can accomplish things as human beings rather than just males and females.
5. Broadening your child's perspectives by modeling sex-role behavior that is not stereotyped.
6. Having open discussions with your children about men and women and attitudes toward success.
7. Presenting examples for your children that intentionally conflict with traditional viewpoints regarding careers and occupations.
8. Helping your children "daydream" about the future in a nontraditional setting.
9. Making your children aware of the infinite possibilities in life.
10. Reassuring your daughters that they can still be "feminine" while being assertive, composed, and analytical.

11. Emphasizing that personal relationships and domestic roles apply to both sexes.

12. Discouraging your children from describing a male or female solely on the basis of the job they do.

13. Helping your son to be tender, nurturing, gentle, and express emotions.

14. Helping your daughter to be ambitious, independent, and successful.

15. Assisting both sons and daughters in preparing for home and family roles.

16. Encouraging all children to be and become all that each is capable of becoming.

17. Being an example of a well-rounded, self-actualized individual yourself.

18. Encouraging both sons and daughters to pursue all career possibilities.

19. Showing your children what broad opportunities are available to them.

20. Encouraging daughters to receive an education appropriate to their potential.

21. Capitalizing on your children's differences rather than strengthening the idea of conformity.

22. Expressing a warm and accepting feeling for sons and daughters day by day.

Source: Parent's Guide to Bias-Free Career Planning. Columbus, Ohio: Career, Education, & Training Associates, 1993

Girls have a right to be themselves—people first and females second—and to resist pressure to behave in sex stereotyped ways.

Girls Incorporated believes that girls are entitled to certain basic rights— rights that they are denied through the limitations of gender stereotypes. Adults can take several steps to enable girls and young women to take care of themselves and lead interesting lives. They can work with girls to help them change their own lives and they can work to change society, to create a better world for girls to live in. Both efforts are necessary to make these basic rights a reality—to get past the pink and blue predicament.

To Change Girls' Lives:

Provide opportunities for girls to explore roles, experiences and activities that are generally reserved for boys. Girls may not ask for the opportunity to hold a snake, learn carpentry or construct an electrical circuit but they participate eagerly when given the chance to do so.

Enable every girl to become a media critic. Examine the portrayals of girls and women in television programs, popular songs, movies, books and magazines: Are the portrayals realistic? Are female characters judged more by their looks or their actions?

Celebrate the accomplishments of women who are competent in nontraditional areas.

To Change the World Girls Live in:

Pressure toy and publishing companies to produce nonsexist toys, books and materials in which girls are involved in activities that go beyond nurturing and romantic roles.

Organize letter-writing campaigns to protest products, advertising and media that reinforce stereotyping.
Ensure that child-rearing classes and materials emphasize the limitations unwittingly imposed by gender stereotyping.

To Change Girls' Lives:

Girls have a right to express themselves with originality and enthusiasm.

Make sure girls get equal time. In coed situations develop rules that give each person a fair chance to speak without being interrupted.

Discourage tentative, questioning, approval-seeking approaches that girls are socialized to use. Teach girls skills that help them to think on their feet, make their points and defend their positions without apology.

To Change the World Girls Live in:

Organize training sessions for adults who work with children to identify and counteract sexist attitudes and practices.

Encourage adults to share decision-making authority with girls so that their voices have a significant impact on their own lives and the lives of others.

Ensure equal participation of girls in youth forums and public events involving youth.

To Change Girls' Lives:

Girls have a right to take risks, to strive freely and to take pride in success.

Avoid rescuing girls. Encourage girls to make an imperfect product, to get dirty, disheveled and sweaty in pursuit of a goal, to make big, interesting mistakes.

Refuse to accept "I won't" or "I can't" in place of "I don't know how." Then help girls develop the skills and confidence to say, "I'll try."

Praise girls for their skills and successes, not only for their appearance.

To Change the World Girls Live in:

Confront widespread notions of female fragility. Challenge views in the media and elsewhere of assertive women as "unfeminine" or destructive.

To Change Girls' Lives:

Girls have a right to accept and enjoy the bodies they were born with and not to feel pressured to compromise their health in order to satisfy the dictates of an "ideal" physical image.

Help girls understand and appreciate their bodies as they are. Work with girls to develop a personal style that feels comfortable and attractive to them.

Help girls together with their parents discuss and learn about the difficult and important issues of sex and sexuality. Start early—by age 9 at the latest—and stay late—through the teen years.

To Change the World Girls Live in:

Pressure the media and the fashion industry to expand their definitions of beauty and to celebrate women in ways that go beyond physical appearance.

Advocate for extensive sex education that tells girls the truth.

To Change Girls' Lives:

Girls have a right to be free of vulnerability and self-doubt and to develop as mentally and emotionally sound individuals.

Hold equal and explicit expectations for sexual behavior for boys and girls.

Offer girls training in self-defense and in sports that promote feelings of strength.

Encourage girls to appreciate their accomplishments rather than dwelling on their limitations.

To Change the World Girls Live in:

Challenge societal expectations that allow pervasive sexual harassment and violence against girls and women. Demand strong laws on sexual harassment and violence. Provide special support to girls faced with discrimination or sexual harassment.

To Change Girls' Lives:

Debunk the myth of Prince Charming in favor of the reality that most women will work outside the home for a large proportion of their lives.

Girls have a right to prepare for interesting work and economic independence.

Provide opportunities to develop interests and skills that can lead to careers—agriculture, art, astronomy . . . zoology.

Introduce girls to dynamic women who combine paid work, volunteer work and family life in innovative ways.

To Change the World Girls Live in:

Address sexism in vocational education, departments of parks and recreation, art museums and science centers and anywhere else young people are sorted by gender into programs based on interests or skills they are "supposed" to have.

Lobby for legislation to make career and family a survivable combination—for parental leave, health coverage, child care, youth development programs, mainstreaming of people with disabilities.

Work to achieve comparable pay for work of comparable value.

As a society we continue to clobber young people with the importance of gender from birth, sorting and guiding them into skills and interests according to their sex. Today, when most women need to earn a living even when they have young children, we are depriving girls of survival skills if we fail to encourage them in science and technology, critical to most fields paying high wages. And we squash their self-confidence and jeopardize their health if we continue to judge and reward girls primarily based on how they look. We can narrow some of these critical gaps in the opportunities girls have to be employable, healthy and self confident—and the comparable gaps in opportunities boys have to prepare for friendship and parenthood—through targeted interventions and the concerted effort of people who care.

Excerpt from Past the Pink and Blue Predicament: Freeing the Next Generation from Sex Stereotypes, Copyright 1992
Girls Incorporated, 441 West Michigan Street, Indianapolis, IN 46202
(317) 634-7546

MOST TEENAGERS SAY THAT PARENTS HAVE THE STRONGEST INFLUENCE ON THEIR CAREER DECISIONS

What can parents do?

✦ *Increase your influence by updating your own knowledge about careers...*

- Ask a school counselor or teacher for information about careers, and the courses/training needed to prepare for them.
- Request copies of career information being shared with your child.
- Find out more about the career experiences your child's school offers (career fairs, field trips, visiting speakers, etc.).

✦ *Encourage your child...*

- to explore a variety of career possiblities.
- to pursue education/training to support her potential.
- to daydream about the future and talk about his goals.

Source: NYS Occupational Education Equity Center.

IDEAS FOR PARENTS

JUDITH MACALPINE, LORETTA RECTOR, PAUL D. JONES, AND ADELE NEUBERG

> *Parents need to encourage their daughters and sons to pursue subjects that genuinely and individually interest them rather than following traditional career paths because they are girls or boys, but parents can't do it alone anymore than the schools can do it alone. We have to work together.*
>
> —Susan Bailey
> Director of the Center for Research on Women
> Wellesley College, Wellesley, MA

Tips for Parents

- Inspire her with stories featuring gutsy little girls
- Watch TV with her
- Expose her to a range of experiences
- Take her to work with Mom and/or Dad
- Encourage her to develop math skills
- Talk about science and math
- Encourage her to be a problem solver
- Visit math/science classes
- Hold high expectations for her
- Get PTA and other organizations involved in the gender issue
- Offer to help your child's teacher in school
- Check homework—be positive
- Play games that involve math with her
- Choose a wide variety of games avoiding stereotypical choices
- Encourage independence and responsibility
- Offer guidance but encourage her to fight some battles
- Be truthful about sexual stereotypes
- Offer guidance from BOTH parents in course selection
- Discuss her personal and career goals
- Let her choose

Source: Woodrow Wilson Gender Equity in Mathematics and Science Congress (WW-GEMS)

DEVELOPMENT TRAITS	CAREER NEEDS	PARENT INVOLVEMENT
Prekindergarten—3rd Grade:		
☐ Needs and seeks attention and praise. ☐ Has boundless energy. ☐ Considers fantasy as reality. ☐ Needs confidence building. ☐ Shows a variety of tension releasing behaviors.	☐ Distinguish between work and play. ☐ Identify different types of work. ☐ Experience different types of work activities. ☐ Describe how decisions are made. ☐ Demonstrate a positive attitude. ☐ Identify personal feelings.	☐ Listen and encourage. ☐ Encourage involvement in a variety of sports/hobbies. ☐ Positively reinforce child for completing chores. ☐ Praise efforts toward work as well as accomplishments. ☐ Show an interest and stress importance of school. ☐ Give toys that promote role playing. ☐ Make decisions with—not for your children.
4th Grade—6th Grade:		
☐ Is more independent. ☐ Feels that belonging to a group and friends are important. ☐ Can assume more responsibility. ☐ Has a surprising scope of interests. ☐ Can think on own, but is influenced by others.	☐ Identify personal interests, abilities, strengths, and weaknesses. ☐ Describe how work at home and/or school relates to jobs in community. ☐ Describe how work is important and attainable to all people. ☐ Describe how personal beliefs and values effect decision making.	☐ Encourage good work habits at home. Gradually add responsibilities. Effort/experience are more important than quality. ☐ Avoid assigning jobs at home by sex to avoid stereotyping. ☐ Show various workers in your community. ☐ Participate in the school's career education program. ☐ Listen as your child makes decisions. Keep in mind peer pressure.
7th Grade—8th Grade:		
☐ Is undergoing dramatic physical changes. ☐ Is sensitive and has a need for approval. ☐ Tries to build a unique identity apart from parent's influence. ☐ Wants more independence. ☐ Is curious but not ready for planning. ☐ Expresses feelings more openly.	☐ Demonstrate effective skills in working with others. ☐ Show an appreciation for the similarities and differences among people. ☐ Describe individual skills and aptitudes required to fulfill life roles. ☐ Identify strategies for managing personal finances. ☐ Describe skills needed in a variety of occupations. ☐ Demonstrate skills needed to obtain and keep a job.	☐ Discuss your child's skills, interests, abilities, and goals to help plan for the future. ☐ Encourage participation in service-oriented activities in the community. ☐ Help children meet a variety of workers by arranging job observations, field trips, or personal interviews. ☐ Use guided money management and allow your child to make economic choices. ☐ Allow children to work part-time outside the home.
High School:		
☐ Develops a sense of self-identity. ☐ Begins a more prominent and realistic work/career search. ☐ Develops a concern about social issues. ☐ Matures sexually with physical and emotional changes. ☐ Increases independence.	☐ Understand how individual personality, abilities, and interests relate to career goals. ☐ Understand how education relates to college majors, further training and/or entry into the job market. ☐ Demonstrate transferable skills that can apply to a variety of occupations and changing work requirements. ☐ Be able to use a wide variety of career information resources. ☐ Show responsibile decision making.	☐ Help your child make independent decisions. ☐ Encourage exploration of all kinds of post secondary education opportunities. ☐ Involve yourself in your child's future planning. ☐ Give certain economic responsibilities. ☐ Encourage job awareness. ☐ Be flexible as the decision-making process evolves. It takes patience and numerous modifications.

Source: NOICC National Career Development Guidelines.

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FACTS & FIGURES: A QUIZ ABOUT
—— TODAY'S WORKFORCE REALITIES ——

✦ ***Together with your child, try to complete these statements by using the figures listed in the righthand column.***

✔ A married woman can expect to spend _____ years in the paid workforce.

✔ _____% of U.S. families were comprised of an employed father, homemaker mother and two children in 1991.

✔ Women comprise approximately _____% of U.S. engineers.

✔ By the 21st century, _____% of the people on public assistance will be women and dependent children.

✔ Men comprise _____% of registered nurses.

50
34
21
72
8
35
6
80
99
4
25
15
31
65
10

NYS Occupational Education Equity Center, 1993.

FACTS & FIGURES

Answers & Comments

A married woman can expect to spend 34 years in the paid workforce. An average man can expect to spend 41 years in the paid workforce (U.S. Department of Labor). This indicates the need to prepare both boys and girls for dual careers -- one in the workforce and one that focuses on family/home responsibilities. Men are not usually the sole "breadwinners", women often need to share in the financial support of the family. Both need to share in the home responsibilities.

In 1991, only 6% of the United States families consisted of an employed father, homemaker mother and two children -- the "traditional nuclear family." ("Reform Versus Reality." Phi Delta Kappan, September 1991). If the family is expanded to include any number of children under age 18, the statistic increases to approximately 10%.

Women comprise approximately 8% of U.S. engineers (U.S. Department of Labor, 1992). For every female in high school physics, there are two males. The ratio of females to males in college physics courses is 1:5 (Science Education, May 1990).

By the 21st century, 99% of the people on public assistance will be women and dependent children ("Taking A Stand Against Sexism & Sex Discrimination." Hanmer, 1990). In 1989, the median income for households maintained by women alone was $15, 972 (National Commission on Working Women, Fall/Winter 1991-92).

Men only represent 4% of registered nurses, despite salary increases in this field (Roles in Conflict, 1990).

New York State Occupational Equity Center, 1993

AT HOME CAREER ACTIVITY: AN EXTRA $500,000

OBJECTIVES: To increase awareness of realistic career, education and lifestyle options.

Materials:

Employment ads from local/regional newspapers, activity charts and "An extra $500,000" ditto.

Instructions:

To begin this activity, discuss the " An extra $500,000" ditto: Compare the potential earnings of skilled versus unskilled workers, and the number of years both men and women spend in the workforce. Discuss with your child what it means to be a skilled worker. Discuss what either of you might use $500,000. Together, list some possible abilities and characteristics of today's "skilled" worker.

Next, gather several pages of employment ads and an activity chart. Together, review the employment ads for (1) skill/educational requirements; (2) job duties; (3) salary information and benefits. Under benefits, include anything you consider as a job advantage such as travel, prestige, service to others, excitement, health/child care, vacation time, etc. Use the activity charts to record your findings on several job advertisements.

Together:

- Review and discuss the differences in duties, requirements and benefits between jobs that paid less than $10,000 annually and those that paid more than $20,000. What job characteristics were most appealing?
- Review and discuss the characteristics of some of the lower paying jobs and why these jobs do not pay very well (e.g., low skill, limited need, "traditionally" underpaid, impacted by technology, etc.). Also discuss the characteristics of jobs that appear to pay well and why. What jobs are in high demand? Try to pick out which jobs that you think require good math skills (for investigation later).
- Review the hourly, weekly and annual salaries for the jobs listed. Does a $10,000 annual salary sound like more or less when converted into hourly and weekly rates? Also discuss the difference between gross and net salary.

Source:

Developed by NYS Occupational Education Equity Center, 1993

AN EXTRA $500,000:

Job Title & Duties	Skills/Education Requirements	Possible "Benefits"	Salary: (hrly/wkly/annual)

Parent Packet Activity

SEX EQUITY ISSUES IN VOCATIONAL EDUCATION

Girls in vocational education were being prepared for "Cinderellahood" rather than jobs.

Historically, vocational education enrollments have been highly segregated by sex. Schools reinforced traditional sex-role stereotypes in course offerings, curriculum materials, instruction, and guidance programs. This served to reflect and perpetuate outdated, limited occupational and family roles for both females and males. In fact, prior to the mid-1970s, females were encouraged to prepare solely for the role of full-time homemaker or were led to believe they would work for only a few years in a low-paying, dead-end, "female" occupation. Verheyden-Hilliard (1975) wrote that girls in vocational education were being prepared for "Cinderellahood" rather than jobs.

The goals of vocational sex equity are aimed at changing the following conditions in vocational education.

Unequal Access to Quality Vocational Courses or Schools

In 1974, almost 50 percent of all female students in vocational education were in consumer home economics, training for unpaid work in the family. Another 29 percent were training for entry-level clerical occupations.

Prior to Title IX of the Educational Amendments of 1972 and the Vocational Education Act (VEA) of 1976, both sexes were legally denied access to nontraditional courses and to some vocational schools. Many school districts had policies that required males and females to complete different vocational courses prior to graduation. Course titles such as "Bachelor Living" and "Powder Puff Mechanics" reinforced separation of the sexes in vocational education.

In addition, some vocational student organizations restricted membership to one sex. Thus students' access to quality vocational programs, work study, job placement, and cooperative and apprenticeship programs was limited and often stereotyped.

In 1974, almost 50 percent of all female students in vocational education were in consumer home economics, training for unpaid work in the family. Another 29 percent were training for entry-level clerical occupations (Verheyden-Hilliard, 1975). Most male students concentrated on agriculture and industrial education.

Administrative and vocational education staffing patterns still reflect traditional sex distributions in instructional areas. Across the country, men hold the substantial majority of teaching positions in the program areas of agriculture, marketing, and technology. Women hold similar majorities in health occupations, home economics (wage-earning and consumer), and business education program areas. Men also hold most administrative positions. The lack of nontraditional educator role models acts as a barrier for students because it makes it difficult for them to see themselves succeeding in a nontraditional vocational career.

Sex-Biased Attitudes

Frequently, traditional attitudes about the "proper" role and abilities of females and males contribute to a hostile learning environment for students who have made nontraditional vocational choices.

Attitudes of many educators, students, parents, and employers may still reflect outdated and inaccurate information about labor force participation and a belief that there are "men's" and "women's" jobs. These attitudes limit students' aspirations and occupational choices. Frequently, traditional attitudes about the "proper" role and abilities of females and males contribute to a hostile learning environment for students who have made nontraditional vocational choices. More recently, sexual harassment of young women in vocational classrooms and labs nontraditional for their sex has been recognized as an important issue that needs to be addressed.

Such attitudes also discourage boys from pursuing programs in cosmetology, nursing, health, administrative support services, and other fields nontraditional for their sex. Assumptions usually are made about their financial aspirations, and questions about their masculinity often are raised.

Unequal Vocational Guidance and Counseling

Research revealed that adolescent males were aware of a greater number of occupations and had higher occupational aspirations and expectations than adolescent females.

Prior to Title IX and the VEA of 1976, practices, materials, and assessment tools used different scales to measure interests and aptitudes of females and males and reflected rigid sex-role stereotypes. Research done in the 1970s revealed that adolescent males were aware of a greater number of occupations and had higher occupational aspirations and expectations than adolescent females. Adolescent females were aware of a limited number of occupations and had lower aspirations and expectations of career achievements than adolescent males (Farris, 1978). Counselors may not have kept pace with the changing labor market or the changing roles of males and females, and few have actively incorporated this information into their counseling practices. Aptitude and competency tests still may reflect subtle bias that affect student outcomes.

Unequal Opportunities in and Benefits from Vocational Education

Manifestations of sex bias in the teaching/learning environment create unequal educational opportunities most often for females.

Manifestations of sex bias in the teaching/learning environment create unequal educational opportunities most often for females. Even in coeducational classrooms, examples of sex bias persist in

- vocational texts and instructional materials that reflect, and even exaggerate, traditional, stereotyped roles and a "traditional" division of labor.

- curriculum geared to the interests and needs of only one sex.

- instructional practices that divide students into single-sex groups.

- student evaluations that use different criteria for grading males and females.

- teacher expectations that differentiate, often unintentionally, between male and female students and reflect negative bias.

- unequal funding for equipment, labs, and student projects in female-intensive vocational programs.

- a higher ratio of students to teachers in female-intensive vocational programs.

Lack of Support Services for Females

Lack of support services in the vocational education setting is a greater barrier to female participation than to male participation.

Lack of support services in the vocational education setting is a greater barrier to female participation than to male participation. This is especially true for low-income women, women returning to school after many years, minority women, single parents, and women seeking nontraditional occupations. Support services needed include child care, transportation assistance, financial aid, medical assistance or insurance, flexible class scheduling, special counseling and guidance, remedial classes, role models, peer support groups, community mentors, prevocational assessment, and job development and placement services.

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Gender Equity and School-to-Work Fact Sheet

Women, Education, and Work

The more education a woman has, the greater the likelihood she will seek employment. Women and men with specialized technical training can expect to earn half a million dollars more in their lifetime than someone who is working at a low-skill, minimum-wage job.

- Almost as many women as men drop out of school.
- Median earnings for female high school graduates (with no college) working year round, full time in 1991 were less than those of fully employed men who were high school dropouts—$18,042 and $20,944, respectively.

  Source: U.S. Department of Labor, Women's Bureau, Facts of Working Women, No. 93.2, June 1993.

- Women earn at least half of all bachelor's and master's degrees. Women earned 14 percent of bachelor's, 13 percent of master's, and 9 percent of doctorates in engineering. Women earned 46 percent of bachelor's, 40 percent of master's, and 19 percent of doctorates in mathematics. Women earn 26 percent of degrees in dentistry, 33 percent in medicine, and 41 percent in law.

  Source: U.S. Department of Labor, Women's Bureau, Facts of Working Women, No. 93.2, June 1993.

- Under the existing vocational education system, young women are tracked into dead-end jobs where their wages are only 71 percent of what their male peers make.

  Source: National Women's Law Center, 1994 School-to-Work Fact Sheet.

- Lower-paid, lower-skilled jobs are held by more Hispanics and especially by Hispanic women more than any other ethnic groups.

  Source: McKay, E.G. (1986), Hispanic Demographics: Looking Ahead. Washington, DC: National Council of La Raza.

- Females and people of color continue to be underrepresented in science-related employment. In 1988 females and people of color represented only 33 percent and 2.6 percent, respectively, of all scientists.

  Source: National Science Foundation (1990), Women and Minorities in Science and Engineering (Report No. 90–301).

- Women represent
  - 1.9% construction trades
  - 8% of scientists
  - 8% engineers
  - 19.8% engineering technologies
  - 18.4% architects
  - 19.3% doctors
  - 20% lawyers—but 6% law partners

  Source: Bureau of Labor Statistics, Dept. of Labor; National Center for Education Statistics, U.S. Dept. of Education.

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Gender Equity and School-to-Work Fact Sheet

Women Are the Work Force

Women will comprise 47 percent of the labor force by the year 2005. Women of Hispanic origin and Asian and other women will have the fastest growth—both at 80 percent. Black women's labor force growth of 34 percent will also exceed the average for all women.

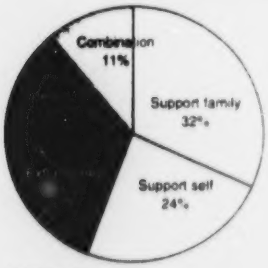
- Of the 54 million employed women in the United States, 75 percent work full time.
- Women are still overrepresented in low-paying jobs, with almost half (44 percent) of employed women working in support jobs. Women earn only 75 cents for every dollar earned by men when comparing 1992 median weekly earnings of full-time workers ($381 for women and $505 for men).
- Women are less likely than men to be self-employed.

Source: U.S. Department of Labor, Women's Bureau, Facts of Working Women, No. 93-2, June 1993

- Women were 51.3 percent of the U.S. population in 1990 but were 57.7 percent of all persons in poverty.
- Between 1970 and 1990, a startling 99 percent of the increase in the number of families living in poverty was among families headed by women.

Source: 1993 Handbook on Women Workers: Trends and Issues, U.S. Department of Labor, Women's Bureau, p. 27

Why Women Work



All Working Women

- Fifty-nine percent of wives in married-couple families were labor force participants.

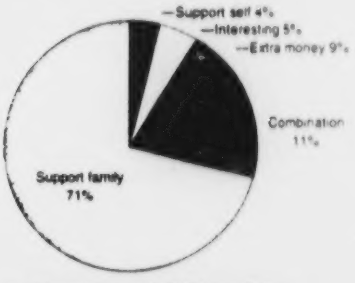
Source: U.S. Department of Labor, Women's Bureau, Facts of Working Women, No. 93-2, June 1993

- In 1992, 7.1 million families with children under age 18 were maintained by women. Of these families, 64 percent were white, 33 percent were black, and 12 percent were of Hispanic origin.
- Single (never married) women with children under age 18 participated at a rate of 52.5 percent; widowed mothers, 61.4 percent; married mothers with absent spouses, 63.7 percent; and divorced mothers, 80.3 percent.

Source: U.S. Department of Labor, Women's Bureau, Facts of Working Women, No. 93-3, June 1993

Chart Source: *A staff study prepared by the Joint Economic Committee, Congress of the United States, May 9, 1986*

Women and Families



Working Women with Children at Home

Women who maintain families, especially those with children under age 18, have more serious socioeconomic problems than other women in the population. Some of these problems include higher unemployment and lower average educational attainment. A higher proportion of families maintained by women have children to rear, as compared with married-couple families. Responsibilities for the care of children, especially of very young children, restrict employment and earning opportunities for many women.

Source: 1993 Handbook on Women Workers: Trends and Issues, U.S. Department of Labor, Women's Bureau

Chart Source: *A staff study prepared by the Joint Economic Committee, Congress of the United States, May 9, 1986*

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Women and Youth with Disabilities

The proportion of disabled women in the labor force, working or looking for work, rose from 23.5 percent in 1981 to 27.5 percent in 1988, while that of women with no work disability increased from 63.9 percent to 69.5 percent.

- Women with work disabilities are nearly three times as likely as nondisabled women to be unemployed.
- Disabled women workers earned 38 percent less than nondisabled women workers in 1987. This compares to a 30 percent difference in 1980. Disabled women had mean earnings of $8,075 in 1987. Black women with work disabilities had earnings of $6,432 in 1987, while women of Hispanic origin earned $7,559. Men with work disabilities had mean earnings of $15,497.

Source: U.S. Department of Labor, Women's Bureau, Facts of Working Women, No. 92.2, March 1992.

- In the educational system today gender-role stereotyping and attitudes about women and girls with disabilities result in fewer educational services, lack of vocational training, and limited access to postsecondary education. Women of color with disabilities face even greater discrimination, and very little is known about the specific needs of women with disabilities who go on to college.

Source: Educational Equity Concepts, Issue Paper Number 1, A Report on Women with Disabilities in Postsecondary Education.

- Around 8.6 million young people ages 10 to 17—nearly one-third of the nation's 27.2 million adolescents—have disabilities.

Source: 1988 National Health Survey by the National Center for Health Statistics.

The School-to-Work Opportunities Act of 1994 Mandates Gender Equity

Check to see how the following are addressed in your state or local plan:

Section 3. Purposes and Congressional Intent

a. (13) to increase opportunities for minorities, women, and individuals with disabilities, by enabling individuals to prepare for careers that are not traditional for their race, gender, or disability.

Section 4. Definitions

(2) ALL STUDENTS - Both male and female students from a broad range of backgrounds and circumstances, including disadvantaged students, students with diverse racial, ethnic, or cultural backgrounds, American Indians, Alaska Natives, Native Hawaiians, students with disabilities, students with limited-English proficiency, migrant children, school dropouts, and academically talented students.

(4) CAREER GUIDANCE AND COUNSELING

(C) aid students to develop career options with attention to surmounting gender, race, ethnic, disability, language, or socioeconomic impediments to career options and encouraging careers in nontraditional employment.

Title 1 - School-to-Work Opportunities Basic Program Components

Section 102. School-Based Learning Component

The school-based learning component of a School-to-Work opportunities program shall include

(1) career awareness and career exploration and counseling (beginning at the earliest possible age, but not later than the 7th grade) in order to help students who may be interested to identify, and select or reconsider, their interest, goals, and career majors, including those options that may not be traditional for their gender, race, or ethnicity;

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Gender Equity and School-to-Work Fact Sheet

School to Work Opportunities Act of 1994, continued

Section 104. Connecting Activities Component

(7) collecting and analyzing information regarding post-program outcomes of participants in the School-to-Work Opportunities program, to the extent practicable, on the basis of socio-economic status, race, gender, ethnicity, culture, and disability . . .

Title II - School-to-Work Opportunities System Development and Implementation Grants to States

Subtitle A - State Development Grants

Section 203. Application
(b) Contents - Such application shall include
(2) a description of how
(I) the individual assigned by the State under section 111(b)(1) of the Carl D. Perkins Vocational and Applied Technology Education Act [the State Sex Equity Administrator] will collaborate in the planning and development of the statewide School-to-Work Opportunities system;

Section 205. Use of Amounts
which may include
(9) developing a training and technical support system for teachers, employers, mentors, counselors, related services personnel, and others that includes specialized training and technical support for the counseling and training of women, minorities and individuals with disabilities for high-skill, high-wage careers in nontraditional employment;

Subtitle B - State Implementation Grants

Section 213. Application.
(2) Review and comment by certain individuals and entities-
(Identifies the State Sex Equity Administrators as one of the individuals who, if not involved in the development of the proposal, must comment on it as part of the application process.)

(b) Contents. Such application shall include
(4) a description of the manner in which
(I) [the State Sex Equity Administrator] collaborated in the development of the application.

(d) State Plan. A State plan shall-
(7) describe the strategy of the State for providing training for teachers, employers, mentors, counselors, related services personnel, and others, including specialized training and technical support for the counseling and training of women, minorities, and individuals with disabilities for high-skill, high-wage careers in nontraditional employment, and provide assurances of coordination with similar training and technical support under other provision of law.

(14) describe the goals of the State and the methods the State will use, such as awareness and outreach, to ensure opportunities for young women to participate in School-to-Work Opportunities programs in a manner that leads to employment, and goals to ensure an environment free from racial and sexual harassment.

Section 215. Use of Amounts.
(b) Subgrants to Local Partnerships.
(2) Application. A local partnership . . . shall submit an application to the State that
(A) describes how the program will include the program components described in sections 102, 103, and 104 and otherwise meet the requirements of this Act,

(C) describes the local strategies and timetables of the local partnership to provide opportunities **for all students** in the local area served to participate in a School-to-Work Opportunities program.

(4) Allowable Activities . . . such activities may include, for each such program-
(H) providing supplementary and support services, including child care and transportation, when such services are necessary for participation in a local School-to-Work Opportunities program.

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What Exactly Are Non-traditional Trades ?

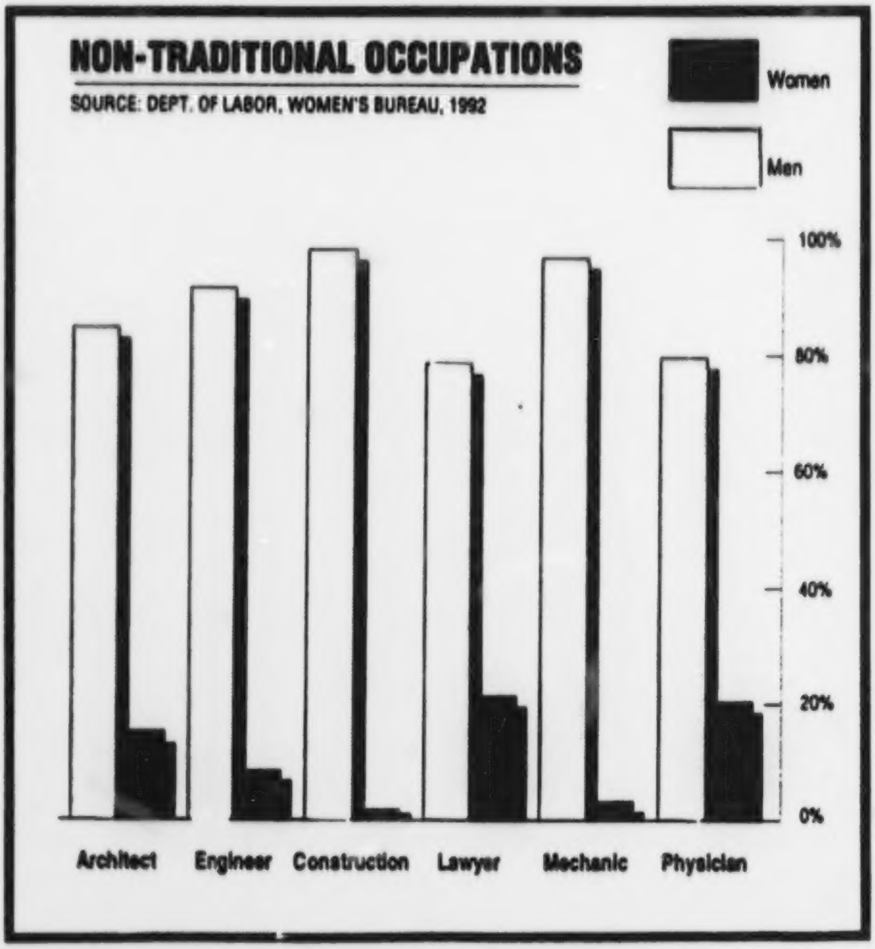
The term "non-traditional" is frequently utilized in various aspects of career development activities, but is there a clear definition on what that term really means? According to the U.S. Department of Labor, non-traditional occupations (NTOs) are jobs in which women make up less than 25 percent of the total number of workers in that occupation. According to the most recent DOL statistics, in 1992 53.8 million women were employed. Of that total, 3.5 million, or 6.6% of all working women were employed in non-traditional occupations.

Which occupations are non-traditional for women?

Some examples include:
Skilled Trades/Apprenticeships: Bricklayer, Bulldozer Operator, Carpenter, Electrician, House Painter, Ironworker, Locksmith, Pipefitter, Plumber, Printer, Roofer, Stonemason, Weatherproofer, Welder
Technical Jobs: Air-Conditioning Mechanic, Air Traffic Controller, Automobile Mechanic, Computer Repairer, Drafter, Forestry Technician, Gem Setter, Motion Picture Projectionist, Press Photographer, Telephone Installer
Service Jobs: Bellhop, Exterminator, Furniture Mover, Gardener, Milk Person, Parking Attendant, Service Station Attendant, Tailor, Taxi Driver, Theater Manager, Tow Truck Operator, Train Conductor
Public Service Jobs: Ambulance Driver, Bus Driver, Detective, Firefighter, Guard, Police Officer
Professions: Archaeologist, Architect, Biologist, Chiropractor, Congressional Representative, Dentist, Film Director, Geologist, Hospital Administrator, Judge, Lawyer, Meteorologist, Oceanographer, Physician, President of the United States, Rehabilitation Counselor, Sportswriter, Supermarket Manager

The accompanying graph gives some examples of the small percentage of women employed in the United States in these occupations .

■ Some of the information regarding non-traditional careers was obtained from The 1995 Information Please Women's Sourcebook. This comprehensive guide of "Resources and Information to Use Every Day" includes organizations, information and resources on a wide range of issues for women such as education, work, child care, health, and retirement. Additional information was from Wider Opportunities for Women, Inc. (WOW), a nonprofit women's employment organization. Many thanks to The Equity Center for the loan of these resource materials.



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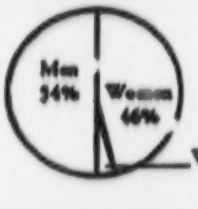
Women and Nontraditional Work

U.S. Department of Labor defines nontraditional occupations as jobs in which women make up less than 25% of the total number of workers in that occupation.

In 1992, 53.8 million women were employed; 3.5 million women (6.6% of all working women) were employed in nontraditional occupations.

Occupational Categories	# of women in nontraditional jobs	Examples
Managerial, Professional	638,000	lawyer, engineer
Technical, Sales, Administrative Support	539,000	pilot, electronic technician
Service	295,000	police, barber
Production, Craft, Repair	622,000	auto mechanic, carpenter
Operators, Fabricators, Laborers	1,003,000	welder, truck and taxi driver
Farming, Forestry, Fishing	444,000	farmer, fisher, groundskeeper
	3,541,000	

Between 1988 and 1992, the number of women in nontraditional jobs remained relatively unchanged at 3% of the total number of employed workers.



Total Men and Women Employed

Women in nontraditional jobs = 3% of employed women and men

Differences in race/ethnicity, age and marital status are minimal between women working in traditional jobs and women in nontraditional jobs.

Characteristics	% of All Women Working in: Traditional	Nontraditional
White	84%	86%
Black or Hispanic	16%	14%
Under 35	44%	43%
35 or over	56%	57%
Single	37%	41%
Married	63%	59%

Women working in nontraditional jobs typically earn 20%–30% more than women in traditional occupations.

Traditionally Female Jobs	Women's Median Weekly Pay		Traditionally Male Jobs
Secretary	$373	$523	Mechanic/Repairer
Child Care Worker	$153	$318	Motor Vehicle Operator
Textile Sewing Machine Operator	$216	$445	Police Officer
Data Entry Clerk	$344	$587	Mail Carrier

When women work in the same occupations as men they still do not earn equal pay.

Occupation	Wages: Women	Men	Wage Gap
Truck Driver	$299	$421	29%
Freight, Stock and Material Handler	$278	$314	12%
Police/Detective	$445	$552	19%
Printing Machine Operator	$308	$464	33%

Over the past 5 years, the greatest increase of women working in nontraditional jobs has been in the professional occupations.

Occupation	Percent Female: 1988	1992
Lawyer	19.3%	21.4%
Engineer	7.3%	8.5%
Surveyor/Mapmaker	4.3%	6.7%
Physicist/Astronomer	7.1%	11.1%

Even though most working women (73%) are in nonprofessional occupations, gains in those nontraditional jobs have been minimal or nonexistent over the past 5 years.

Occupation	Percent Female: 1988	1992
Electrician	1.4%	1.2%
Telephone Installer	12.1%	10.5%
Truck Driver	4.3%	4.6%
Automobile Mechanic	.7%	.8%

Wider Opportunities for Women, 1325 G St., N.W., Lower Level, Washington, DC 20005 (202) 638-3143

U.S Department of Labor
Women's Bureau
Facts on Working Women

20 FACTS ON WOMEN WORKERS

No. 96-2
September 1996

1. There were **103 million** women age 16 and over in the United States in 1995. Of that total, a record **61 million** were in the civilian labor force (persons working or looking for work).

2. Women's share of the total labor force continues to rise. Women accounted for **46 percent** of total United States labor force participants in 1995 and are projected to comprise 48 percent in the year 2005.

3. Nearly six out of every ten women--58.9 percent--age 16 and over were labor force participants (working or looking for work) in 1995.

4. Women between the ages of 20 and 54 had labor force participation rates of at least 70 percent. Even half the Nation's teenage women ages 16- 19 were labor force participants--52 percent.

5. Labor force participation by marital status varies for women. Divorced women have higher participation rates mainly because they are the primary or the only wage earners in their families.

6. Unemployment for all women in 1995 was only **5.6 percent.** For white women it was 4.8 percent; 10.2 percent for black women; and 10.0 percent for Hispanic women.

7. Nearly 58 million women were employed in 1995 with the largest proportion still working in technical, sales, and clerical occupations.

8. Women have made substantial progress in obtaining jobs in the managerial and professional specialties. In 1985 they held one-third (35.6 percent) of managerial and executive jobs and nearly half (49.1 percent) of the professional jobs. By 1995 they held 48.0 percent of all managerial/executive positions and over half (52.9 percent) of professional occupations.

9. Women are not only more likely to work outside the home today than in the past, but they also spend more time at work than did women in earlier years. Women have increasingly opted to work both full time and year round, partly due to economic necessity, but also due to movement into occupations that require full-time, year-round work.

10. Of the **57.5 million** employed women in the United States in 1995, 42 million worked full time (35 or more hours per week); 16 million worked part time (less than 35 hours per week). Two-thirds of all part-time workers were women (68 percent).

11. Many women who work part time are multiple job holders. In 1995, **3.6 million** women held more than one job. The highest rates of multiple job holding was among women 20 to 24 years old and single women--7.3 percent and 7.2 percent, respectively.

12. Of all women who were multiple job holders in 1995, those in the 35 to 44 age group were most likely to hold 3 or more jobs.

13. The ratio of women's 1995 median weekly earnings to men's was **75.5 percent.** Even in traditionally female occupations where women outnumber, women still earn less than men.

14. With women still concentrated in lower paying occupations and having overall earnings about three-fourths that of men, it is predictable that more adult women than men are below the poverty level.

15. Of the 14 million families maintained by women, **4.2 million** were below the poverty level in 1994. This represents 34.6 percent of all families with female householders.

16. Women have, however, made great strides in becoming entrepreneurs According to the latest Census Bureau data, women owned over 6.4 million of all U.S. businesses in 1992, employing over 13 million persons and generating $1.6 trillion in business revenues.

17. Nearly three-quarters of these women owned firms operated as a service or retail trade in such businesses as apparel and accessory stores; automobile dealerships; gasoline service stations; miscellaneous retail stores; business services; health services; and personal services.

18. In 1995, 3.4 million women were self-employed workers in nonagricultural industries. A large number of these self-employed women worked in the following industries: wholesale and retail trade; professional services; personal services; and social services.

19. Of all labor force participants age 25 years and over in 1995, women were more likely than men to have completed high school. Ninety-one percent of female labor force participants held the minimum of a high school diploma, compared with 88 percent for men. A slightly lower percentage of female labor force participants than men were college graduates -- 27 percent compared with 29 percent.

20. Employment and earnings rates rise with educational attainment for both females and males, but earnings are lower for females than for males with the same education.

Source: U.S. Department of Commerce. [Bureau of the Census. Income, Poverty and Valuation of Noncash Benefits: 1994.

U.S. Department of Labor

Office of the Secretary
Women's Bureau
Washington, D.C. 20210

NONTRADITIONAL OCCUPATIONS FOR WOMEN IN 1996*

(numbers in thousands)

Occupations	Employed (Both Sexes)	Employed (Female)	Percent (Female)
Sales representatives, commodities, except retail	1,559	390	25.0
Guards	811	200	24.6
Operators, fabricators and labors	18,197	4,440	24.4
Messengers	175	41	23.7
Butchers and meat cutters	242	54	22.3
Printing machine operators	407	90	22.0
Correctional institution officers	267	58	21.7
Chemical technicians	84	18	21.5
Drafting occupations	233	49	20.9
Metal and plastic processing machine operators	164	34	20.8
Upholsters	59	11	19.5
Handlers, equipment cleaners, helpers and labors	5,021	969	19.3
Farm workers	840	158	18.8
Architects	163	27	16.7
Sheriffs, bailiffs and other law enforcement officers	126	20	15.8
Metalworking and plastic working machine operators	390	57	14.7
Dentists	137	19	13.7
Police and detectives, protective service	97	13	13.6
Woodworking machine operators	127	17	13.2
Police and detectives, public service	566	73	12.9
Electrical and electronic technicians	361	46	12.7
Surveying and mapping technicians	73	9	12.6
Clergy	354	44	12.3
Funeral directors	55	6	11.6
Motor vehicle operators	4,025	451	11.2
Supervisors, protective services	184	19	10.5
Engineers	1,906	167	8.5
Construction inspectors	69	5	7.4
Sheet metal workers	126	9	6.9
Cabinet makers and bench carpenters	79	5	6.2
Machinists	491	30	6.1
Grounds keepers and gardeners except farmers	875	53	6.0
Supervisors, related agricultural occupations	126	6	4.7
Material moving equipment operators	1,093	50	4.6
Water and sewage plant operators	64	3	4.3
Mechanics and repairers	4,521	185	4.1
Forestry and logging occupations	108	4	3.5
Pest control occupations	64	2	2.6
Extractive occupations	130	3	2.5
Construction trades	5,108	128	2.5
Firefighting and fire prevention occupations	231	5	2.1
Transportation occupations except motor vehicles	184	4	2.0
Airplane pilots and navigators	114	2	1.4

*Nontraditional occupations are any that women comprise 25% or less of the total employed.

CAREER OPPORTUNITIES

The 20 Hot Job Tracks

FIELD	TRAINING/BACKGROUND	Entry/avg. earnings	COMMENTS
Business Valuator	BS in accounting or related field, CPA license, and experience in specialized industry	$30,000/ 37,000	Valuators , one of the largest and fastest-growing disciplines for CPAs, determine a company's worth and tax burdens.
Computer Animator	BA or MA with focus on art, action drawing and computers	$41,600	There is much work in interactive games, the Internet, commercials, TV, film shorts and movies.
Financial Planner	BS; training in finance or accounting a plus; MBA or sales or marketing background useful	$20,000	Banks, brokerages and mutual funds want to expand services for individuals and small businesses.
Crisis Specialist	Strong background in PR with a government agency or private business and a degree in journalism, advertising or communications	$23,000	Duties include reporting bad news to the media and encouraging bosses to repair image with act of goodwill.
Math/Science Teacher	State license rules differ - usually BS in education with concentration in math and science	$33,300/ 35,500	Recent math/science grads prefer more lucrative jobs in technology firms creating need for teachers.
Computer Engineer	BS in computer engineering, electrical engineering or math; advanced computer skills helpful	$55,000	Design sophisticated hardware systems; integrate software into established systems.
Pollution Fighter	BS in environment, chemical or industrial engineering is typical; MS helpful but not required	$30,000/ 34,000	Pollution prevention industry is expected to grow by 10% this year.
Physician Assistant	Degree or certificate from medical college or teaching hospital; most have 2 yrs of college and previous health care experience	$52,750	Demand is greatest in rural areas and inner cities.
Training Specialist	BS or MS in computers, psychology, education, or organization management preferred	$31,400	Gap between workplace demands for technical expertise and skills workers have provides opportunity for those who can teach computer skills.
Internet Executive	An open field, need top marketing and managerial skills and must be committed to future of the Net	$150,000/ 175,000	Companies seek Net-savvy executives to oversee their new media or Internet products and divisions.
Business Expert	Law degree with business law course work	$82,900	Mergers and acquisitions have created a wealth of work for those handing corporate legal issues.
Supply Chain /Logistics	Business or finance background; MBA and experience in information systems both a plus	$50,000	Managing the flow of product and information is in great demand as a business discipline.
Cosmetic Dentist	Dental school; most practitioners take postgraduate courses in cosmetic procedures	$104,100	Demand is greatest in large metropolitan areas such as LA and Chicago.
Professional Organizer	Strong managerial skills, flexible schedules, ability to listen to clients' needs	$40,000	One of the fastest-growing areas for home-based businesses.
Corrections Officer	BS in criminal justice, psychology or related field, preservice training can last up to 16 weeks	$20,000	Today's position combines the duties of police officer, social worker, counselor, security specialist, manager and teacher.
Electronics Specialist	BS in business, computer science or another technical field	$38,400	Needed to generate sales on new and existing accounts and provide technical product information.
Grief Therapist	MSW plus clinical experience	$35,000	Demand is highest in areas like Florida with large elderly populations.
Wireless Technician	BS preferred but technician training programs from trade school or community college accepted	$35,000	Looking for qualified people to keep up and repair equipment and sites used for cellular phone calls.
Truck driver	Trucking school for commercial licence, must be 21 yrs. old	$25,000/ 35,000	Growth in truck freight has led to huge demand - this year the worst shortage in a decade.
Inbound Tour Guide	No special training but many are college graduates and bilingual	$20,000	Foreign visitors need knowledgeable guides, best prospects in areas with large international airports and tourism areas.

US News & World Report, October 27, 1997

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The 10 Industries With the Fastest Employment Growth, 1996-2006

Numbers in thousands of jobs

Industry description	Employment		Change, 1996-2006	
	1996	2006	Number	Percent
Computer and data processing services	1,208	2,509	1,301	108
Health services, nec.	1,172	1,968	796	68
Management and public relations	873	1,400	527	60
Miscellaneous transportation services	204	327	123	60
Residential care	672	1,070	398	59
Personnel supply services	2,646	4,039	1,393	53
Water and sanitation	231	349	118	51
Individual and miscellaneous social services	846	1,266	420	50
Offices of health practitioners	2,751	4,046	1,295	47
Amusement and recreation services, nec.	1,109	1,565	457	41

The 10 Occupations With the Fastest Employment Growth, 1996-2006

Numbers in thousands of jobs

Occupation	Employment		Change, 1996-2006	
	1996	2006	Number	Percent
Database administrators, computer support specialists, and all other computer scientists	212	461	249	118
Computer engineers	216	451	235	109
Systems analysts	506	1,025	520	103
Personal and home care aides	202	374	171	85
Physical and corrective therapy assistants and aides	84	151	66	79
Home health aides	495	873	378	76
Medical assistants	225	391	166	74
Desktop publishing specialists	30	53	22	74
Physical therapists	115	196	81	71
Occupational therapy assistants and aides	16	26	11	69

The 10 Occupations with the Largest Job Growth, 1996-2006

Numbers in thousands of jobs

Occupation	Employment		Change, 1996-2006	
	1996	2006	Number	Percent
Cashiers	3,146	3,677	530	17
Systems analysts	506	1,025	520	103
General managers and top executives	3,210	3,677	467	15
Registered nurses	1,971	2,382	411	21
Salespersons, retail	4,072	4,481	408	10
Truck drivers light and heavy	2,719	3,123	404	15
Home health aides	495	873	378	76
Teacher aides and educational assistants	981	1,352	370	38
Nursing aides, orderlies, and attendants	1,312	1,645	333	25
Receptionists and information clerks	1,074	1,392	318	30

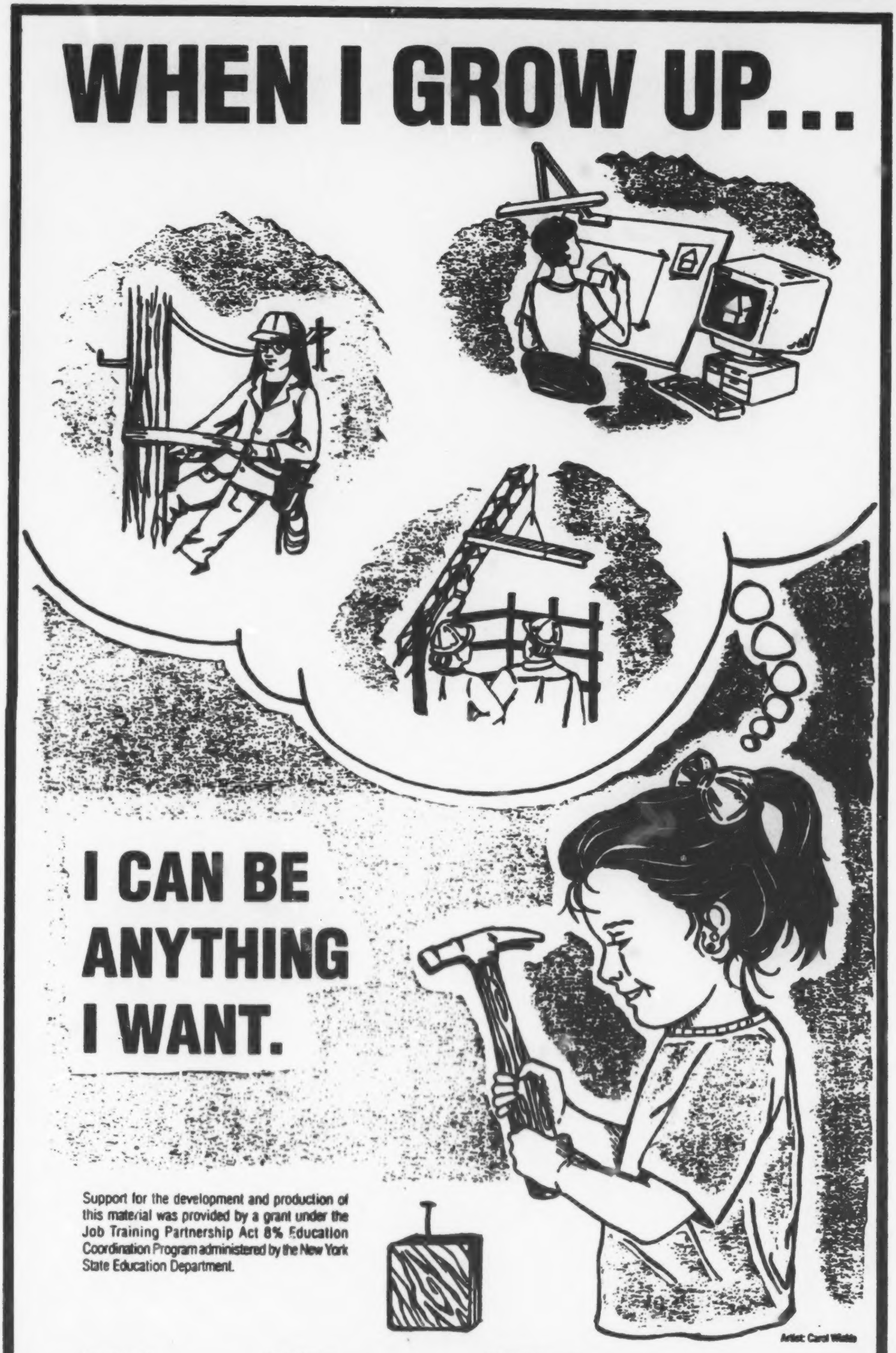
Last modified: December 1, 1997

Fastest Growing Jobs in America

Fastest growing occupations, 1994–2005, moderate alternative projection

[Numbers in thousands]

Occupation	Employment		Numerical change	Percent change
	1994	2005		
Personal and home care aides	179	391	212	119
Home health aides	420	848	428	102
Systems analysts	483	928	445	92
Computer engineers	195	372	177	90
Physical and corrective therapy assistants and aides	78	142	64	83
Electronic pagination systems workers	18	33	15	83
Occupational therapy assistants and aides	16	29	13	82
Physical therapists	102	183	81	80
Residential counselors	165	290	126	76
Human services workers	168	293	125	75
Occupational therapists	54	93	39	72
Manicurists	38	64	26	69
Medical assistants	206	327	121	59
Paralegals	110	175	64	58
Medical records technicians	81	126	45	56
Teachers, special education	388	593	206	53
Amusement and recreation attendants	267	406	139	52
Correction officers	310	468	158	51
Operations research analysts	44	67	22	50
Guards	867	1,282	415	48
Speech-language pathologists and audiologists	85	125	39	46
Detectives, except public	55	79	24	44
Surgical technologists	46	65	19	43
Dental hygienists	127	180	53	42
Dental assistants	190	269	79	42
Adjustment clerks	373	521	148	40
Teacher aides and educational assistants	932	1,296	364	39
Data processing equipment repairers	75	104	29	38
Nursery and greenhouse managers	19	26	7	37
Securities and financial services sales workers	246	335	90	37


WHEN I GROW UP...
I CAN BE ANYTHING I WANT.

Support for the development and production of this material was provided by a grant under the Job Training Partnership Act 8% Education Coordination Program administered by the New York State Education Department.

Artist: Carol Wiebe

George E. Pataki
New York State Governor

John E. Sweeney
Commissioner Department of Labor

Dr. Daniel A. Domenech
District Superintendent, Western Suffolk BOCES

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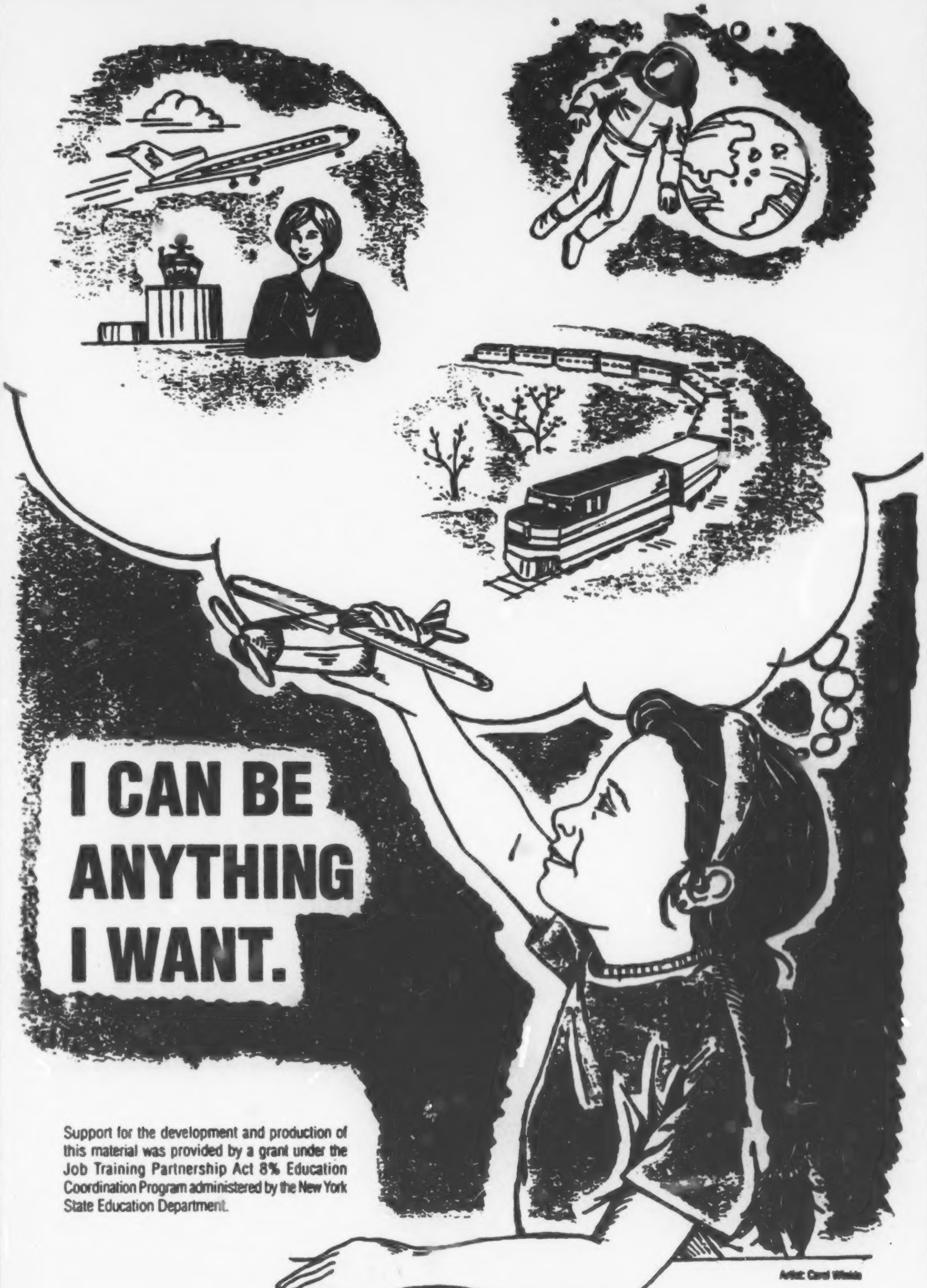

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George E. Pataki
New York State Governor

John E. Sweeney
Commissioner Department of Labor

Dr. Daniel A. Domenech
District Superintendent, Western Suffolk BOCES

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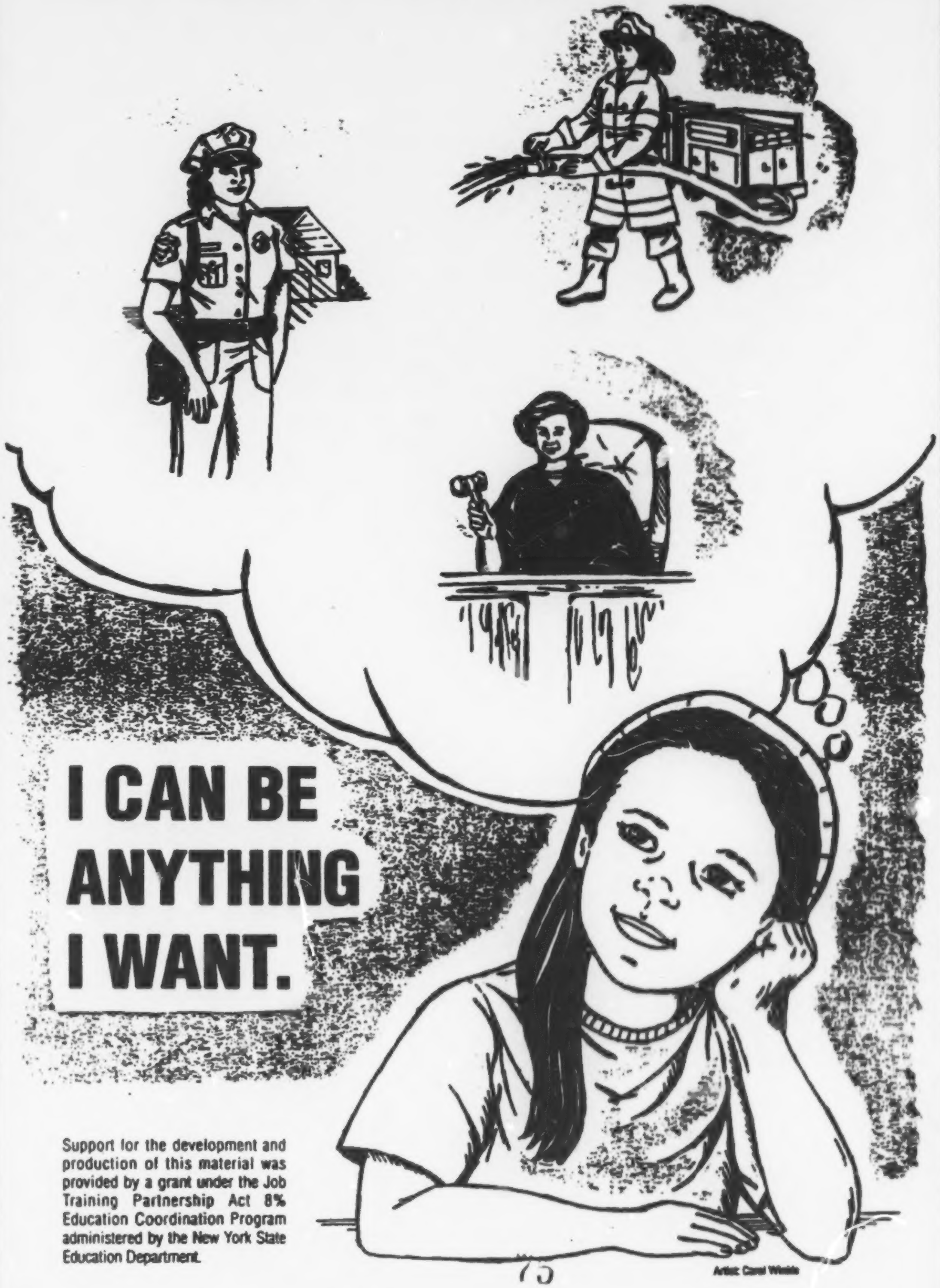

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Artist: Carol Wilde

George E. Pataki
New York State Governor

John E. Sweeney
Commissioner Department of Labor

Dr. Daniel A. Domenech
District Superintendent, Western Suffolk BOCES

Equity or Security?

"Until now, the role of minorities, women, and people with disabilities in science and engineering has been widely seen only as an equity issue, rather than as the key to future national strength in science and technology."

—Changing America: The New Face of Science and Engineering, Interim Report, 1988

Source: Access to Scientific Professions: Increase Representation and Equity manual, Michigan Department of Education

Why Don't Many Females and Minority Students Take Higher Level Mathematics and Science Courses

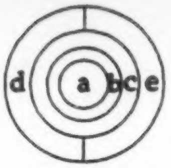
- Sex, race and cultural stereotyping
- Curriculum focuses on western science as the only legitimate science
- Lack of role models
- Lack of persistence, external focus of control
- Peer pressure not to be good in academics
- Don't believe mathematics and science are useful
- Haven't been successful in the past
- Believe math and science are too difficult
- Society, family, teacher and counselor information is short-sighted—get out of school with good grades rather than foundation needed for college and life.
- Classroom instruction favors learning styles of those who choose math and science courses and careers—white males.

Source: Access to Scientific Professions: Increase Representation and Equity manual, Michigan Department of Education

DROPPING MATH??

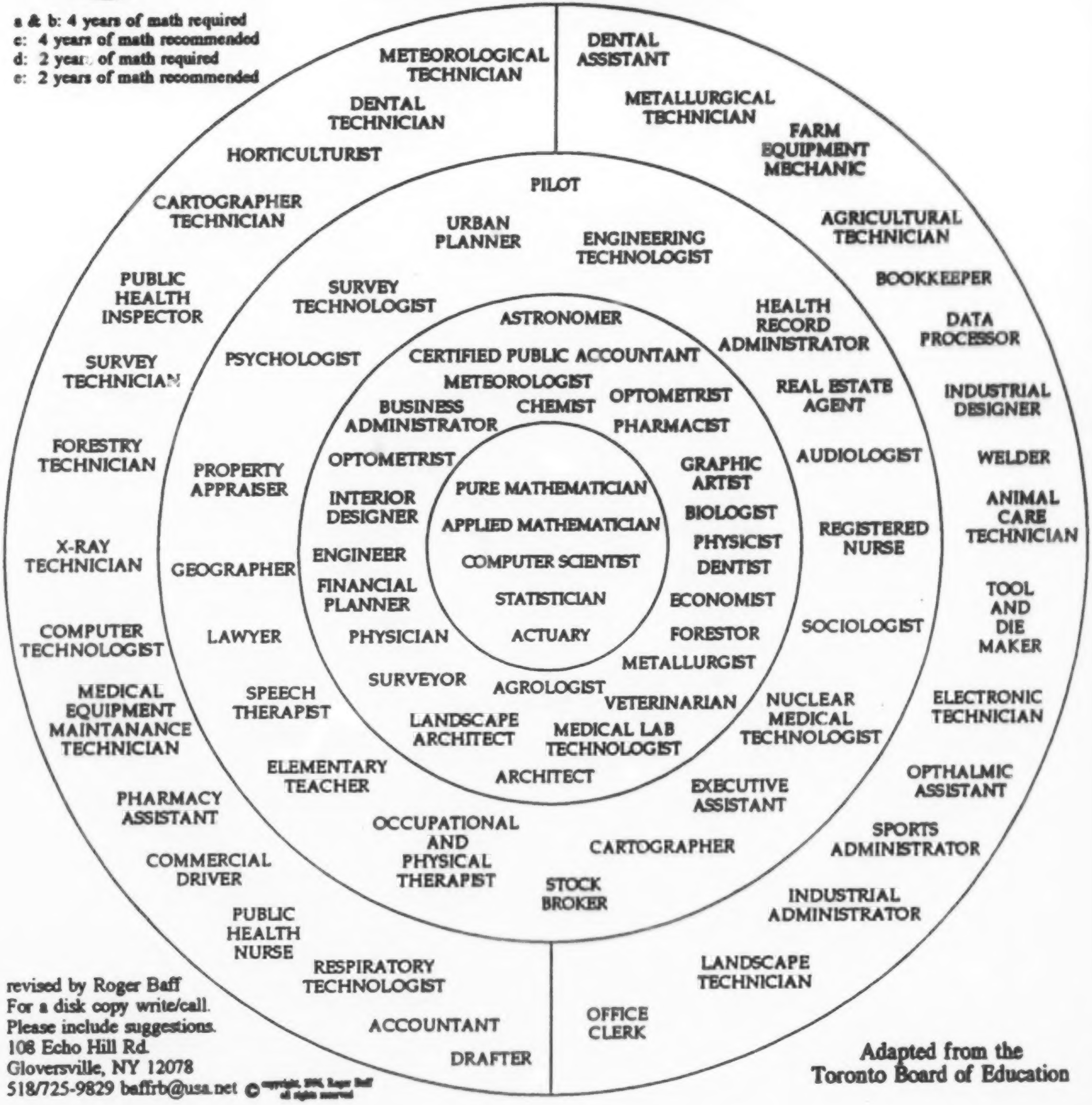
Say Good-Bye To Over 80 Jobs

LEGEND:



a & b: 4 years of math required
c: 4 years of math recommended
d: 2 years of math required
e: 2 years of math recommended

SOME CAREERS INVOLVING MATH



PURE MATHEMATICIAN
APPLIED MATHEMATICIAN
COMPUTER SCIENTIST
STATISTICIAN
ACTUARY

ASTRONOMER
CERTIFIED PUBLIC ACCOUNTANT
METEOROLOGIST
BUSINESS ADMINISTRATOR
CHEMIST
OPTOMETRIST
PHARMACIST
OPTOMETRIST
GRAPHIC ARTIST
INTERIOR DESIGNER
BIOLOGIST
PHYSICIST
ENGINEER
DENTIST
FINANCIAL PLANNER
ECONOMIST
PHYSICIAN
FORESTOR
METALLURGIST
SURVEYOR
AGROLOGIST
VETERINARIAN
LANDSCAPE ARCHITECT
MEDICAL LAB TECHNOLOGIST
ARCHITECT

PILOT
URBAN PLANNER
ENGINEERING TECHNOLOGIST
SURVEY TECHNOLOGIST
HEALTH RECORD ADMINISTRATOR
PSYCHOLOGIST
REAL ESTATE AGENT
PROPERTY APPRAISER
AUDIOLOGIST
REGISTERED NURSE
GEOGRAPHER
SOCIOLOGIST
LAWYER
SPEECH THERAPIST
NUCLEAR MEDICAL TECHNOLOGIST
ELEMENTARY TEACHER
EXECUTIVE ASSISTANT
OCCUPATIONAL AND PHYSICAL THERAPIST
CARTOGRAPHER
STOCK BROKER

METEOROLOGICAL TECHNICIAN
DENTAL TECHNICIAN
HORTICULTURIST
CARTOGRAPHER TECHNICIAN
PUBLIC HEALTH INSPECTOR
SURVEY TECHNICIAN
FORESTRY TECHNICIAN
X-RAY TECHNICIAN
COMPUTER TECHNOLOGIST
MEDICAL EQUIPMENT MAINTANANCE TECHNICIAN
PHARMACY ASSISTANT
COMMERCIAL DRIVER
PUBLIC HEALTH NURSE
RESPIRATORY TECHNOLOGIST
ACCOUNTANT
DRAFTER

DENTAL ASSISTANT
METALLURGICAL TECHNICIAN
FARM EQUIPMENT MECHANIC
AGRICULTURAL TECHNICIAN
BOOKKEEPER
DATA PROCESSOR
INDUSTRIAL DESIGNER
WELDER
ANIMAL CARE TECHNICIAN
TOOL AND DIE MAKER
ELECTRONIC TECHNICIAN
OPTHALMIC ASSISTANT
SPORTS ADMINISTRATOR
INDUSTRIAL ADMINISTRATOR
LANDSCAPE TECHNICIAN
OFFICE CLERK

revised by Roger Baff
For a disk copy write/call.
Please include suggestions.
108 Echo Hill Rd.
Gloversville, NY 12078
518/725-9829 baffrb@usa.net

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Adapted from the Toronto Board of Education

Orange County Community College
Gender Equity Program*

Hands-On Laboratory Experiences in Technology

Orange County Community College has operated a VATEA funded Gender Equity Program within the Technologies Department since 1989. The purpose of the program is to encourage females to pursue and persist in technical careers which are nontraditional for their gender.

Hands-On Laboratory Experiences in Technology are designed and supervised by OCCC Technologies Department faculty and facilitated by OCCC student role models. Activities range from a technology expo for 137 middle school students to an after-school program for the Girl Scouts. Many times, students complete a project which they may take home with them.

A search of the literature and direct experience in working with hundreds of young students led to the development of a checklist of female-friendly teaching strategies which shape the development and delivery of the Hands-On Laboratory Experiences.

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*The Gender Equity Program is funded by a Vocational and Technical Education Act grant through the New York State Education Department

Outsmarting Indiana Jones

Orange County Community College
Gender Equity Program*
Hands-On Laboratory Experiences
Designed by Arlin Bartlett

Description: A problem-solving exercise using mathematics, metric measurement and observation.

Time: 45 minutes or may be expanded

Age Level: Middle school - adult.

Objective: To help students to think critically and scientifically when watching action movies. To familiarize students with measurement, metric conversion, concepts of density and volume.

Materials: First 10 minute clip from "Indiana Jones-Raiders of the Lost Ark" movie. Text resource for densities of gold and silicon.

Procedure:

1. Introduce "Indiana Jones" movie clip, explaining that there is something that is not technically correct in this clip.

2. Show clip and discuss Indy's replacement of the gold head with a bag of sand.

3. Guide students in using their powers of observation to estimate the dimensions of the head.

4. Guide students in calculating the volume of the head ($V = l \times h \times w$). (Alternative: measure volume by displacing water with a mannequin head.)

5. Calculate weight of gold head ($W = v \times$ specific gravity) and then convert to grams to pounds.

6. Calculate weight of the sand Indy used.

7. If time permits, calculate the volume of sand needed to equal the weight of the gold head.

*The Gender Equity Program is funded by a Vocational and Technical Education Act grant through the New York State Education Department

Outsmarting Indiana Jones
Worksheet

1. Specific gravity (density) of gold = ________________gms/cc

2. Specific gravity of sand (silicon) = ________________gms/cc

3. Volume = length *x* height *x* width

   length = _______cm
   height = _______cm
   width = ________cm

   Volume of head = _______cc

4. Weight = volume *x* specific gravity (density)

   Weight of head must be converted to kilograms:

   w = _______grams w = _______kg

   Weight in kilograms is converted to weight in pounds
   (1 kg = 2.21 lbs.):

   w = _______pounds

Introduction to Computer-Aided Drafting

Orange County Community College
Gender Equity Program*
Hands-On Laboratory Experience in
Architecture

Description: This activity can be introduced at any level of an architecture awareness education program. Architectural forms and elements, floor plans, [illegible]vations or buildings can be drawn on the computer screen. This can be a separate activity or part of a series involving board drafting.

Time: 1 to 2 hours

Age Level: Grades 7 - 12

Objective: To familiarize students with technological applications of the computer.

Materials: Sealed, measured drawing of object(s) to be drawn with CAD. Handout of computer commands.

Equipment: AUTOCAD LT R12 software
486 IBM compatible PC's

Procedure:

1. Students are introduced to the uses of CAD by showing them computer-rendered drawings of simple forms, floor plans, building elevations, site plans complex and detailed buildings.

2. Students are introduced to the CAD software program through a demonstration.

3. Students work individually or in pairs and complete the assigned drawing. (Students are closely supervised by faculty and college student role models.) Completed drawings are printed and the printout given to the students.

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*The Gender Equity Program is funded by a Vocational Technical Act grant through the New York State Education Department

Basic Design Forms

Orange County Community College
Gender Equity Programs*
Hands-On Laboratory Experience in
Architecture

Description: Simple geometric shapes are cut out of black paper and arranged to represent the basic forms of a building or building complex.

Time: 45 minutes to 90 minutes

Age Level: Grades 6 - 12

Objective: To familiarize students with positive and negative space, balance and harmony of forms.

Materials: Black paper, white paper, glue, tape for displaying finished assemblages

Equipment: Scissors, straight edge

Procedure:

Circles, triangles, rectangles, and squares are cut out of black paper. (Students may do this as part of the activity.) Each student is given the same number and assortment of shapes along with a piece of white paper. Students are instructed to arrange the shapes in a building form. (Some shapes may be used for secondary structures such as courtyard or pool.) When arrangements are finalized, students paste the shapes in place on the white paper. The papers are displayed and then critiqued by the instructor and students. **Note: This procedure follows a discussion and illustration of pleasing form in architecture.**

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*The Gender Equity Program is funded by a Vocational and Technical Act grant through the New York State Education Department

Build Your Dream House

Orange County Community College
Gender Equity Program*
Hands on Laboratory Experience in
Architecture

Description: Students are guided through a studio experience in which their "dream house" is sketched. Depending upon the age of the students and the time allotted, the activity may also include building a three dimensional model of the dream house.

Time: 1 hour to 3 hours

Age Level: Grades 6-12

Objective: To give students a personal experience with design and architecture.
To familiarize students with fundamentals of architectural drawing.

Materials: Drawing pencils, paper, scissors, heavy stock paper, glue if model building.

Equipment: Drafting table, T-square

Procedure: Students are divided into small groups which are led by a college architectural student or faculty member. Each student describes a dream house which the group leader troubleshoots (anything unrealizable is modified) and then quickly sketched. Participants then complete a more detailed drawing of their dream house. When all the drawings are completed, participants show their dream houses to the group and explain any design difficulties they encountered. If time allows, models may then be constructed.

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*The Gender equity Program is funded by a Vocational and Technical Education grant through the New York State Education Department.,

Crystal Radio

Orange County Community College
Gender Equity Program*
Hands on Laboratory Experiences
Designed by: Joy L. Decker

Description: The crystal radio is a kit which after assembly is a functioning AM Radio which the students are permitted to take home.

Time: 45 minutes - 1 hour

Age Level: Grades 3 - 12

Objective: To familiarize students with basic electronic circuitry and test equipment. Students should gain an understanding of how each component functions in the circuit as well as how the circuit operates as a whole.

Materials:

1 - Crystal Radio Kit (e.g. Radio Shack #28-177)

Equipment:

Screwdriver Oscilloscope

Procedure:

1. Prior to students' arrival, kits are opened and checked to be sure all necessary components are intact.
2. Once students arrive, explain how the radio functions without a power source.
3. Begin step by step assembly instructions.
4. When complete, connect each radio to the antenna and oscilloscope to be sure it is working before the student takes it home.
5. Explain proper grounding techniques for home installation and answer any questions.

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*The Gender Equity Program is funded by a Vocational and Technical Education Act Grant through the New York State Education Department.

The Robotic Arm

Orange County Community College
Gender Equity Program *
Hands on Laboratory Experiences
Designed by: Joy L. Decker

Description: This demonstration introduces students to robotics and their industrial applications. It also gives the students a chance to program the robotic arm's movements independently.

Time: 45 minutes

Age Level: Grades 3 - 12

Objective: To familiarize students with robotics and their applications in industry and to demonstrate the actual use of a robotic arm.

Materials:

4 page handout
objects for robotic arm to pick up
Video ____________________

Equipment:

Television
Robotic Arm
Video Cassette Recorder

Procedure:

1. Introduce demonstration to students and handout worksheets.
2. Show first 15 minutes of the video.
3. When video is complete, go over worksheet and demonstrate programming procedure of the robotic arm.
4. Once this is complete allow the students to program the robotic arm's movements independently.

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*The Gender Equity Program is funded by a Vocational and Technical Education Act Grant from the New York State Education Department.

Chemistry In A Toy Store

Dr. Joseph Sprague, Professor, Chemistry, SUNY Cobleskill

SLIME

Preparing a Weird Polyester

1. Weigh out 0.5 grams (1/8 tsp) of guar gum onto a folded piece of weighing paper as follows:

   Fold the weighing paper in half and then open it (leaving a crease down the middle of the paper)

   Place the paper on a balance and press the ZERO bar

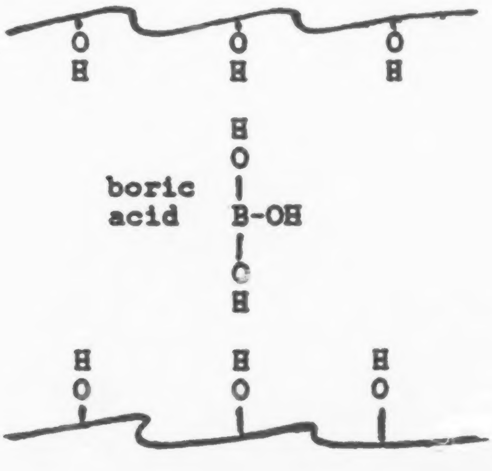
   Add the guar gum with a spatula till the balance reads close to 0.5 grams – you don't have to be exact

2. Place 100 mL (3 oz.) into a paper drinking cup (5 oz.). Use a 100 mL graduated cylinder to measure the water. Add the guar gum and stir for about 1 minute. **Do you observe any change in the water?**

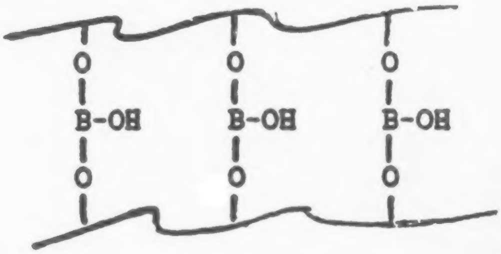
3. Add 2 or 3 drops of food coloring if you want your slime to be colored.

4. Measure out 5 mL of boric acid solution with a small graduated cylinder (this is just Borax dissolved in water – 1 1/4 to 1 1/2 tsp Borax to 100 mL of water; allow 30 minutes to dissolve). Add this to your paper cup and stir. **Any changes??**

5. Store your slime in a plastic bag.



slime polymer



SILLY PUTTY

Preparing a Fluid with Weird Properties

1. Fill a paper cup with 25 Ml (about 1 ounce) of Elmer's Glue. Measure 20 mL of water in a large graduated cylinder and add it to the cup of glue. Stir thoroughly
2. Add 2 or 3 drops of food coloring if you want your product to be colored.
3. Measure out 5 mL of boric acid solution with a small graduated cylinder (this is just Borax dissolved in water – 1 1/4 to 1 1/2 tsp Borax to 100 mL of water; allow 30 minutes to dissolve). Add this to your paper cup and stir.
4. The product will sort of "glob" onto your stirring stick. You can dry your product off a bit by blotting it with a paper towel – slide it off the stick with your hand. Your product will stick to skin and is rather messy, but it washes off easily. It's quite safe to handle, but not very edible.
5. Your product will become dryer, easier to handle and bouncier in time. But store it in a plastic bag to prevent it from drying out completely.

A Narrowly Gender-Based Model of Learning May End Up Cheating All Students

Single-sex classrooms and other newly popular strategies for closing the gender gap ignore the pressing need to see students as individuals

BY ROBERTA TOVEY

Do schools systematically shortchange girls? Yes, say a growing number of researchers, educators, and social critics. This realization has sparked interest in a variety of programs and policies intended to help girls get more out of school, from teaching techniques tailored to girls' needs to insulating girls from boys in math and science classes. At the same time, there is reason to fear that such programs and policies will deepen gender stereotypes, "water down" the curriculum, label girls as having "special needs," and ultimately cheat all students.

It may be time to shift our focus, say some researchers. Instead of thinking in terms of gender, it may be more useful to expand our concept of learning and teaching. "What we're talking about is modes of teaching as well as modes of learning," says Nona Lyons, director of teacher education at the University of Southern Maine. "We have to give students the broadest possible experience of learning."

Ask the Kids

Lyons and other researchers in the field of gender equity are moving towards a more individualized approach to learning and teaching. "What sense do kids themselves make out of their experience?" asks Lyons. She has been interviewing students to try to understand how each individual learns. "What do they find nurturing? Where do they find an ally? How do they make their way through the schools?" Lyons resists referring to "girls" or "boys"; instead, she talks about "kids."

Indeed, Lyons avoids generalizing about the learning styles of the girls she has been interviewing. "The way kids learn is highly idiosyncratic," she says, recalling a student whose love of math countered gender stereotypes—not only was math one of her favorite subjects, but "she loved math because there really was a right answer. "Kids," says Lyons, "can find support at school in a variety of ways." Lyons suggests that teachers "do more investigation" of individual students. "Teachers can make inquiries about how kids learn—on even a simple level, such as, 'When you're doing this math problem, how do you go about it?'" Lyons describes a seventh grader whose portfolio included a project about Plains Indians. "How did you become interested in the topic?" Lyons asked her. The girl answered that at first "I wasn't at all interested in the topic— but I became interested when I started to think about the everyday lives of these people, how they ate, dressed, worked." Teachers can use information like this to enrich students' "understanding of and connection to learning," says Lyons.

Shifting the focus from gender to the needs of the individual student does not mean dismissing the gender equity research of the last 15 years. The American Association of University Women (AAUW) published a review of the most important of these findings in 1992, entitled *How Schools Shortchange Girls*. The report was one impetus for the inclusion of a package of gender equity provisions in the 1994 Elementary and Secondary Education Act. Myra and David Sadker's 1994 book, *Failing at*

Fairness, which painted a grim picture of how girls experience school, received wide attention.

These studies show that teachers pay more attention to boys in class, give boys more constructive feedback than they give girls, and in general send the message to girls that they are not as important as boys. Girls are steered away from subjects they need to compete in the job market, such as math, computers, and science. There is also agreement among researchers that as a result of these practices girls' achievement has suffered, that they fall behind in math and science in middle and high school, and that their ability to deal with challenges and failure is compromised.

Some critics question these studies. Valerie Lee of the University of Michigan says that *Failing at Fairness*, which is largely anecdotal, "does not contain an ounce of real research." And the AAUW has been accused of overstating findings, such as those on girls' self-esteem, in the course of pursuing a political agenda.

Inequity: A Two-Way Street

Researchers like Lee do not deny that there is a gender gap; they just point out that research and reporting have been one-sided and perhaps exaggerated. "Most gender-difference studies focus on the disadvantages of girls," observes Lee. "To the extent that girls actually experience some explicit or implicit sexism in their education, this is appropriate. But not all academic outcomes favor boys." Lee and colleagues have found in a new study of eighth-graders that the most significant gender difference—engagement with academics—actually favors girls. (they define "engagement" as positive academic behaviors, preparedness for class, and attendance). Girls perform somewhat better in reading while boys do a little better in math, science, and social science, but none of the differences are large. Lee's study was funded by the AAUW, but it has not yet been released.

Another new study by Larry Hedges and Amy Nowell of the University of Chicago yielded similar findings. The researchers analyzed test results in the core subjects and found that girls did better in reading and far better in writing; boys did better in math and science. A news story about this study in the *Boston Herald* headlined only half the findings: "It figures, boys best at Math." Single-sex classes can send a message that girls need special attention, which can be undermining rather than empowering. "The public discourse around issues of gender in school needs some change," says Valerie Lee. "Inequity can, and does, work in both directions. The usual approach to studying gender differences in educational outcomes may not be truly equitable."

Some educators worry that, in focusing on making schools more welcoming for girls, we will inadvertently reinforce gender stereotypes. Annie Rogers of the Harvard Graduate School of Education says that designing teaching programs that are tailored specifically to help girls "is a potentially dangerous road to travel on, and can be distorted and misused." While such programs may be necessary to "right the balance of gender bias in schools today," Rogers says, there are dangers in any kind of affirmative action. "Not the least of these is that girls can be slated as having special needs, that is, special limitations or deficiencies in learning."

Single-Sex Classes

An increasingly popular strategy for promoting gender equity in schools is to create single-sex classrooms, especially in math and science, where girls traditionally lag behind boys after elementary school. "I think this is a terrible idea," says Valerie Lee. "The problem is that there is a basic assumption at work here—that males will dominate—and that that is okay Instead of challenging the hegemony we select these poor victims and put them in a setting where they can be protected." "The cordoning off of girls into separate math or science classes," notes Rogers, "is a short-sighted or at best a short- term solution."

Even supporters of single-sex class rooms call it a temporary remedy. Carol Shakeshaft of Hofstra University regularly runs gender equity workshops for district administrators and teachers. She points to a review of 1,000 studies on single-sex education done for the YMCA, which showed clearly that "single-sex education is best for girls; coeducation is best for boys." Shakeshaft cautions that "as a long-term solution, single-sex education is a mistake." She regards it as "a short-term way of restoring students' confidence and interest so that they can go back into coeducational classes."

Susan McGee Bailey, executive director of the Wellesley College Center for Research on Women and co-author of the AAUW report, has a similar perspective on single-sex classes. "They can send a message that girls need special attention, which can be undermining rather than empowering, " she says. The truth of Bailey's observation is reflected in a recent suggestion, made 'by federal civil rights officials, that all-girl math classes in Ventura, California, schools be labeled "classes for the mathematically challenged " as a way to circumvent Title IX regulations, which specifically outlaw single-sex classes.

"The real issue," says Bailey "is what should go on in the classroom. If it works in single-sex, why not use it in mixed classes?" Bailey, too, advocates a less gender-centered approach to unity. We can see biases in our system as strictly ones of gender, which require compensatory treatment. Or we can see them, Bailey argues, as symptoms of a too-narrow view of education. Much schooling is based on a male developmental model, emphasizing individualism and competition. This model poorly serves many girls, but also shortchanges a significant number of boys. "A very competitive environment may limit all students' academic development," says Valerie Lee. Studies have shown that students in highly competitive classes with little teacher support and stringent grading are more likely to skip class or be delinquent.

Rather than pit one narrow gender centered model against another, a better solution may be to focus on individual differences in students and to integrate a broad range of teaching strategies in classrooms. In this broader view, educators design programs not for a particular gender, but to enrich the learning experience of all students. "The characteristics of 'girl-friendly' classrooms also enhance boys' learning," says Lee. A 1991 study by Renee Peterson found that cooperative learning improved retention and learning levels of both boys and girls.

There is less emphasis in such classrooms on traditional hierarchical practices like lectures and question-and-answer sessions; paired learning is added to competitive learning techniques like spelling bees and math competitions; portfolios are used to assess aspects of students' achievement that are overlooked by standard tests. "Competition and cooperation are not qualities that belong to boys or girls," says Lee Anne Bell of SUNY New Paltz. "How can we create a classroom culture that includes all these qualities?"

Girls Who Love Physics

Many programs designed specifically to engage girls in science and math would be stimulating for any student. Ileana Jones, who teaches physical science at the all-girl Winsor School in Boston, has developed a hands-on approach to her subject. In one of her "engineering problem cycles," Jones asks juniors and seniors to research simple machines, then to use four of these machines to build a compound machine that can pop a balloon. Her fifth- graders put together circuits and set up a bicycle to generate power for running a train; her seventh-graders build lunar vehicles. "Kids love science," says Jones. "You need to find out what a student is interested in and let him or her pursue these interests." Jones feels that observation, the basis of science, has "been played down—we need to get kids out there, doing research in the community." She teaches her students to go out and do their own observations, and to work at "becoming naturalists." Efforts by Jones and other like-minded teachers at the Winsor School have dramatically increased enrollments in the school's physics classes. Winsor now offers three different physics courses, including A.P physics and conceptual physics; the average high school student at the school takes four years of science.

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Hands-On Universe (HOW) is a pilot project in which high school students perform remote observations on professional telescopes using their classroom computers and the Internet. "The process is very visual and artistic as well as analytic and technological," says Jodi Asbell-Clarke, an HOU curriculum developer and teacher in Halifax, Nova Scotia. "We have found tremendous success in reaching students who thought that they 'couldn't do' or 'didn't like' science." She adds that the next step is to develop new HOU curricula "that specifically address the needs of nonreaders, non-English speakers, and all academic and economic backgrounds as well as gender." Projects like HOU and the hands-on work at Winsor are inspired as much by principles of good teaching as by a desire to help girls learn. Jones says that an important way to interest girls in physical science is having "teachers who are excited about their subject." At a 1993 symposium on girls and the physical sciences, sponsored by Tufts University and the National Coalition of Girls Schools, a panel of college students spoke about what helped them most in pursuing science education. Though they spoke of such gender-specific factors as "female mentors who sought out students," the first thing they mentioned was "teachers who made science come alive."

"The themes and teaching strategies recommended during today's discussion can help serve all students," Jones said in her closing remarks at the symposium. "Women need to be a more equitable part of the 5 percent of this nation's population who are scientists and engineers. But what about the other 95 percent? In today's increasingly complex and technological society, we need all our citizens to be scientifically literate."

The Whole Pie

Assumptions about how girls behave and develop are limited by cultural bias, and characteristics often associated with gender may also be a function of social class. Carol Gilligan, Jill Taylor, and Amy Sullivan of Harvard's Graduate School of Education conducted a three-year study of urban girls who are at risk of early parenthood and dropping out. They observed that lower-class white girls do not seem to "lose their voices"—that is, become less outspoken and assertive—as they reach adolescence, in contrast to the middle-class white girls in Gilligan's earlier studies.

According to Taylor, these white girls "sound more like poorer African-American girls who do not tend to share the white middle class cultural conventions of femininity—compliant, not loud or disruptive." Instead, Taylor says, "they have their own set of risks: they get into trouble, they are labeled as loud, bad girls." Taylor also observes that "class is much more difficult to talk about than gender." Broadening our definitions of learning and expanding the range of skills we teach can help all students fare better in today's world. "In the real world," says Whitney Ransome, co-director of the National Coalition of Girls Schools, "things are not always yes or no, true or false, and you don't have to get the right answer in five minutes."

In contemporary Japanese-style corporate models, says Ransome, so called women's ways of running a business are desirable. Cooperation replaces competition; collaborative efforts and learning take the place of traditional command and control management, where orders are issued from the top. "Businesses are moving away from a hierarchical, top down structure to one that is more like a web," notes Ransome.

"All kids need a range of skills," says Carol Shakeshaft. "Boys need to work cooperatively; girls need to learn to compete. Just because girls may feel more comfortable in one mode doesn't mean they should ignore the other. We need to ask, 'What skills are girls more likely to have? What skills are boys likely to have? How can we give each of them what they're missing?' That way, when they grow up, they get the whole pie."

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THE GENDER DEBATE

In their new book *Failing at Fairness: How America's Schools Cheat Girls*, authors Myra and David Sadker say the nation's teachers, textbook writers, and test makers systematically discriminate against girls. That discrimination, they say, is producing a generation of female underachievers.

The nation's teachers, textbook writers, and test makers systematically discriminate against girls. That discrimination is producing a generation of female underachievers.

The American University education professors say boys outperform girls on 11 of 14 standardized tests of achievement. What's more, they say, girls lag behind boys in critical subjects such as math and science and often leave school with damaged self-esteem because teachers pay more attention to boys and expect more from them.

"To me, that's not equity," says the late Myra Sadker, who, with her husband David, had become a sort of point team for female equity in America's schools, along with organizations such as the American Association of University Women.

But the argument that girls are shortchanged in school has its critics. One of the most spirited is former Assistant Secretary of Education Diane Ravitch, who seems to show up in almost every story about gender equity as a sort of counterpoint to conventional wisdom, Ravitch, who is now at the Brookings Institution, argues that, over the past 20 years, girls have made tremendous strides in terms of education.

"Girls are having a crisis of self-esteem? Based on what? This whole thing is a lot of hype," says Ravitch. "This is just a feeding frenzy of victimization."

To prove her point, Ravitch ticks off statistics: Higher percentages of girls than boys now take high school chemistry and biology courses; women now account for more than half of all undergraduate college students and master's degree students; and the number of women receiving doctorate degrees has increased dramatically in the past 20 years.

Although the vast majority of medical students in this country is male, the prestigious Harvard medical school is 61 percent female.

In addition, more women are enrolling in some of the more prestigious universities. In the past 10 years, Princeton increased its percentage of women undergraduates from 36 percent to 43 percent, and Yale increased its female undergraduate population from 44 percent to 47 percent. Although the vast majority of medical students in this country is male, the prestigious Harvard medical school is 61 percent female; 10 years ago, it was 33 percent.

"Women are the biggest success story in American education," says Clifford Adelman, a senior associate in the U.S. Department of Education's Office of Educational Research and Improvement. "Women have more positive attitudes about education, they have higher aspirations, and they are far more realistic than men."

Boys and men, on the other hand, generally receive lower grades throughout school; they make up about two-thirds of the nation's special education population and, according to some recent studies, even have lower educational aspirations than girls. If all that is so, Ravitch asks, how can the Sadkers and others claim women are getting shortchanged in favor of boys? And, she asks, how can they say women have not made remarkable progress in the past 20 years?

"Our response to that is that we absolutely have made progress in the last 20 years," says the late Myra Sadker. "Women have made enormous strides. But we certainly haven't gone all the way."

Advocates for gender equity in schools are lobbying aggressively for Congress to pass Gender Equity in Education legislation, which has already been introduced in Congress. Jackie DeFazio, president of the American Association of University Women, says the legislation is needed to start training teachers how to be "gender fair" in classrooms, recruiting female math and science teachers, and training educators to combat sexual harassment against girls. But the most important aspect of the legislation, she says, is its symbolic value. She says passage of the legislation would be a recognition that schools have shortchanged girls and that efforts must be made to prevent that from happening.

"As an educator, I'm not looking to advance one group of kids at the expense of another," says DeFazio. "This is not a vicious conspiracy. What we're saying is that [although] girls have made progress, they still have a significant way to go."

"As an educator, I'm not looking to advance one group of kids at the expense of another.... What we're saying is that [although] girls have made progress, they still have a significant way to go."

DeFazio says she would also like to see the education community examine why there are so many more boys than girls in special education programs. She believes behavior differences between boys and girls might be one explanation.

In their book, the Sadkers devote a chapter to the "Miseducation of Boys," in which they say boys might be over-identified for special education because of the way they are socialized by society. They also suggest boys might be more self-destructive and violent than girls because society socializes them to be fiercely competitive and aggressive.

"We definitely should be worried about boys," says Myra Sadker. "This issue is a two-edged sword. Boys are at risk, too, in different ways."

And that, say Ravitch and Adelman, is exactly why there is no need to pass a Gender Equity in Education Act. The labor market, not schools, is where feminists should be pushing for gender equity legislation, says Adelman.

"I know that's heretical to say," he says. "But [women] don't need that in education. Why are they asking for this? You've got a bunch of people who've fought the good fight [for educational equality] and don't want to admit they've won. Women are doing terrific in school, but they're getting [shortchanged] in the labor market. That's where their efforts should be focused."--Kevin Bushweller.

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WOMEN'S
EDUCATIONAL
EQUITY ACT
PUBLISHING
CENTER
DIGEST

Building a Self
Teenaged Girls and Issues of Self-Esteem

> *Girls experience a crisis provoked by what their vision of the world and themselves is, and their learning of what the world is really about.*

Adolescent years are a time of change, and change in different areas. In U.S. society, this is a period when many young people begin separating from the family, exploring who they are as individuals, distinct from the relations they have had with other family members. They test their world and themselves to see what their relationship is with friends and community. Many question or push against the beliefs that they've learned from parents or guardians. They also look for others with whom they can fit in—close friends, church groups, gangs, school clubs, sports teams.

Adolescents also experience physical changes in their bodies, many of which are directly linked to their sexuality. And in the majority U.S. culture, sexuality, even for adults, is a difficult issue. The fact that many people feel uncomfortable talking about it, especially with nonadults, combined with media images of sex in terms of violence or power, and teenaged sexual activity spoken about only in negative terms, makes sexuality for many teenagers very confusing.

As adolescents learn what their communities and the dominant culture value, they may face even more struggles. In this context, issues of bias and oppression must be confronted. While researchers have shown that toddlers are already internalizing power structures and knowledge of who "fits" and who doesn't, these issues take on particular significance as teenagers feel their way toward their own identity.

What is self-esteem?

Self-esteem has been difficult for researchers and others to define, much less to measure. As Professor of Psychology Susan Harter notes, "ambiguous definitions of the construct, inadequate measuring instruments, and lack of theory have plagued self-esteem research."[1]

These days, there is a growing consensus among researchers that self-esteem is an image of self that is made up of factors including academic competence, social acceptance, parental approval, and appearance. In this article, the general, but functional, definition will be how much value a person places on her- or himself—their own idea of who they are as a person and who they want to be. This definition will include comfort with and confidence in themselves and their abilities.

Like other studies, a recent American Association of University Women (AAUW) report on self-esteem and educational issues found that, as a whole, body image is inexorably linked to self-image in young women. Not only is physical appearance extremely important, but young women feel increasingly more negative about their bodies as they go through puberty. "Boys tend to view the physical changes positively, as getting bigger and stronger. Girls believe their changes lead in a negative direction, reinforcing their declining self-esteem and gender stereotypes."[2]

Self-esteem and the way we examine it is strongly affected by cultural values and expectations. What one person defines as low self-esteem may be resistance to cultural expectations to another. Almost everyone feels they know intuitively what self-esteem is, but these intuitive definitions are based on cultural learning, affected by all of the values and prejudices of that culture.

What do we know?

The findings of the AAUW report raise important issues concerning young women and self-esteem. It finds, among other things, that in elementary

Next issue: Discussion of Pluralism. If you would like to get additional copies of the *WEEA Digest*, to be added to our mailing list, or to receive our free catalog of gender-fair materials, call 800-225-3088.

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school, self-esteem among girls is slightly lower than in boys, but that during adolescence, when both young women and men suffer falling self-esteem, young women's plummets.

Professor Carol Gilligan of Harvard University postulates that as girls move into their teens, they experience a crisis provoked by what their vision of the world and themselves is, and their learning of what the world is really about.

Gilligan challenged traditional thinking on cognitive development by asserting that females and males have different and "contrapuntal" moral voices, females being more concerned with care and connectedness, and males being more concerned with abstract justice.[3] She questioned the traditional notion that the highest level of human development was autonomy. This model forced women into what were perceived of as lower levels of development than men.

What one person defines as low self-esteem may be resistance to cultural expectations to another.

When disputing this idea, Gilligan brought the issue of developmental differences between the genders to the attention of not only the psychology field, but of a wider lay audience.

While Gilligan's work has since been criticized from several angles,[4] she has been extremely influential in the field, and has continued her work on female developmental psychology. She, with colleagues from the Project on Psychology of Women and the Development of Girls at Harvard, recently published a study on self-esteem and self-concept among primarily white girls at a private girls school in New York.[5]

Group differences

Recently, the findings of several studies have pointed to the dangers involved in generalizing a common female or male experience. The AAUW study, for example, found that among girls, self-esteem levels vary dramatically.

The study looked at three groups of girls—Hispanic, white, and African American. Hispanic girls reported the highest levels of self-esteem among girls in elementary school, but drop the greatest amount—38 points out of 100—although not as low as white girls. White girls start out and end with the lowest self-esteem, dropping 33 points. African American girls, on the other hand, show a much different pattern. They start out with slightly lower levels of self-esteem than Hispanic girls, but drop only 7 points and end with a markedly higher level of self-esteem than Hispanic or white girls.

In a WEEA-funded study, Dr. Ardys Sixkiller-Bowker, of Montana State University, found that 72 percent of the Native American female high school graduates she interviewed reported "liking" themselves in high school, as opposed to 64 percent of high school noncompleters. Only about half of these women reported approving of their appearance, less than half reported having athletic or creative talents, and less than 20 percent said that academic skills were important to their self-image.

Bowker concludes that Native American girls cope with racist views and school structures by defining their self-value in terms of service to others: "being a good daughter or being a good sister, being responsible and dependable, and not doing 'bad things' to other people."[6] This finding has similarities with Nancy Zane's WEEA-funded study, *In Our Own Voices*, in which Zane states that family and community bolster self-esteem among African American girls.[7]

Others have hypothesized that many young women of color develop a stronger self-esteem in the face of hurdles that include racism and classism. But research on this particular aspect of self-esteem is scanty.

Some researchers state that this finding—overcoming bias and prejudice—can sometimes apply to other groups of young women. For example, Beth Zemsky, a psychotherapist who works with lesbian women, has found that young women who are able to claim their sexuality and get support from a community of other lesbians will often have a higher than average level of self-esteem. "This is an act of resistance, in Carol Gilligan's words," Zemsky explains. "Young lesbians receive many, many messages that say being a lesbian is wrong and bad. If young women are able to resolve enough family issues or get out of the family, if they are able to find a community of support, they can often externalize the negative messages. This helps them build a very strong sense of self."

Advocate Harilyn Rousso reports that there is very little hard data on self-esteem and girls with disabilities. Rousso states that often these young women feel, and are, isolated. There is rarely a strong community of other women with disabilities from which to gain confidence and role models.

Zemsky and Rousso both point out that lesbian girls and young women with disabilities most often do not have parents who can identify with and provide support for their particular situation. Whereas most young women of color have mothers who can show support and help them identify and fight racism, disabled and lesbian girls most often are more isolated.

Why does this happen?

Psychologists, such as Jean Baker Miller, talk about psychological or cognitive development. She states that girls, as they grow older, define themselves as a "being-in-relationship." However, because of societal influences, they have also incorporated a sense—again, to varying degrees—that they are not fully and freely to use all of their powers. During adolescence they receive this message in a much stronger way. They meet head-on many of the external forces that provide obstacles to that development.[8]

Schools and self-esteem messages

Other researchers look at the particular influences

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in young women's worlds. Academics is important to many girls. But, says Charol Shakeshaft, schools in the United States teach to only 15 percent of the population. She claims that schools use teaching strategies and curriculum that favor strengths of white, able-bodied males.[9]

Shakeshaft points out, "the average female is ignored—neither reprimanded nor praised. . . . They learn that, if they do well in school, it is because they are lucky or work hard, not because they are smart or capable. The interactions of teachers with students reinforce the societal message that females are inferior."[10]

Lee Anne Bell and Jacqueline Jordan Irvine have looked at how girls react to school structures. They discuss many of the coping strategies that girls use to fit into a system that values different things than they do, while they also try to maintain their connectedness to others. They also stress that a school culture that valued equity and social solidarity instead of competition and individualism would be far more hospitable to most girls.[11]

Female sexuality

Sexuality is a troublesome area for all teenagers, and one that has a direct impact on self-esteem. For instance, on the one hand, young women experience many physical changes that make it known both to themselves and others that they are developing into sexual beings. On the other hand, in American society, they are told both explicitly and implicitly that sexual activity is "bad," and that while women's bodies invite sexual activity, women don't have total control over it.[12]

Herant Katchadourian, a researcher on adolescent sexuality, states that sexual identity—involving both sexual orientation and gender identity—"becomes an integral part of the sense of self."[13] The importance of sexuality to adolescents' identity makes particularly troublesome Michelle Fine's observation that in the United States, discussion of this topic with young women generally deals with victimization by boys, disease, and problem pregnancy.[14]

Dr. Jeanne Marecek, of Swarthmore College, calls for programs that communicate views of women's bodies that are powerful and in control of their own sexuality. Current messages to young women, she remarks, "often identify women's bodies as sites of shame, objectification, danger, and coercion."[15]

The issue of sexuality for lesbian teenagers can be even more difficult than for heterosexuals. A number of experts who work with gay and lesbian youth note that lesbian girls are extremely isolated, and, as social worker Joyce Hunter notes, "girls' traditional socialization puts tremendous pressure on teenaged lesbians to hide their sexual orientation."[16]

Studies are just beginning to look at the special situation of this population, thus there is now little information on their self-esteem issues. The connection between sexual orientation and self-esteem is one that must be explored further. And one of the challenges for researchers in this area is how to look at and include issues for bisexual teenagers and young women unsure of their sexuality.

Effects of low self-esteem

What does all of this mean? There is hardly an area of human life where self-esteem does not play an important role. But only a few of these areas have been researched in terms of the effects of self-esteem level.

In a landmark book, *Women's Ways of Knowing: The Development of Self, Voice, and Mind*, the authors look at developmental issues in young women and how women's "voices" are affected by self-esteem.[17]

Young women who are able to claim their sexuality and get support from a community of other lesbians will often have a higher than average level of self-esteem.

Health issues

A number of health problems have been traced to low self-esteem, including eating disorders, substance abuse, dropout, depression, and suicide. Eating disorders are a phenomena belonging mostly to young women. Ninety to 95 percent of all cases of anorexia nervosa occur in girls. This syndrome—with symptoms including a distorted body image and a refusal to maintain a healthy body weight—seems to be related to young women's declining satisfaction with their physical appearance during adolescence.[18]

Teenaged girls are diagnosed much more often than teenaged boys as being clinically depressed. This difference has been linked with sex-role socialization and to situational factors, in addition to hormonal differences.[19]

Math and science selection

One of the most interesting findings of the recent AAUW study was a "strong relationship between math and science and adolescent self-esteem. Math and science have the strongest relationship on self-esteem for young women, and as they 'learn' that they are not good at these topics their sense of self-worth and aspirations for themselves deteriorate."[20]

The AAUW study also finds that besides having lower overall self-esteem, girls "are more likely than boys to have their declining sense of themselves inhibit their actions and abilities."[21] This finding, coupled with the finding that students who like math and science are much more likely to envision a professional career for themselves than other students, shows that low self-esteem is related to career considerations.

Another interesting finding is that "dramatically, adolescent women who like math are more confident about their appearance than are all adolescent men, whether or not they like math (and [more] than adolescent women who do not like math). And young women who like math and science worry less about others liking them."

This finding implies that young women who enjoy math place more importance on this skill as a part of their self-worth than on acceptance by others, a balance that is more common among young men.

Sports as a positive influence

This "spreading confidence" has also been observed in the area of sports. Mary Ellen Colton and Susan Gore have found that half of all girls who participate in some kind of sports experience higher than average levels of self-esteem and less depression.[22] And two studies by the Women's Sports Foundation support this finding, showing that the most dramatic effects are among Hispanic, African American, and white rural and urban girls.[23]

[Girls] are not fully and freely to use all of their powers.

Further research

Researchers and program directors are calling now for more attention to diversity in studying self-esteem. A recent conference sponsored by the Valentine Foundation and Women's Way of Philadelphia brought together researchers, funders, and advocates to talk about girls' development and their needs.

At this conference, Dr. Harriette Pipes McAdoo, of Howard University, raised the issue of lumping together all girls of color: "Too often stereotypic attitudes blind us [into] looking only at one segment of young women of color, those who are in poverty. . . . We will be more sensitive to the cultural issues that are at play for this group of young girls if we are able to disaggregate the social economic dimension from that of their ethnicity. We must look separately at the needs of Black girls who are from families who are middle class, who are working class, and who are in poverty."[24]

Others have spoken of the diversity of experience within other communities, pointing out that a second-generation Cuban American girl will have very different experiences and idea of self than a recently immigrated Salvadoran girl, or a Puerto Rican teenager. And a young woman from China will have different outlooks than a second-generation Japanese American teenager.

Participants of the Valentine Foundation conference also spoke of the need to consider the development of girls' self-esteem as it relates to "larger issues of women's roles in society and societal impediments to women's growth and development," as well as the "pervasive covert and overt violence against women in the U.S."[25]

Dr. Michael Resnick, director of research at the University of Minnesota Adolescent Health Program, identifies a third area. Along with other researchers, he emphasizes the need to move away from "problem-centered" research and toward research on resiliency and resistance.

"More important for our purposes is to look at a group of teenagers who by all accounts are 'high risk' for failure, but who manage to succeed," he elaborates. "We need to be able to identify what these youth do to resist the negative pressures, what makes them 'resilient.'"

We also need to look past the individuals affected to the structures and the society that have created and sustained the problem. We need to be able to identify problems in these structures and ways to enact change to produce more positive outcomes.

What can we do?

There are many avenues that we need to explore. However, young women need attention now—we cannot wait for "more research." Fortunately there is consensus among many about actions that work.

Michael Resnick states that even though there are many variations among teenagers of different ethnic/racial groups, genders, and social classes, some generalities can be drawn. Research has shown that both parents and schools have a stronger influence on adolescents' self-esteem than have their teenaged peers.

In Resnick's research on resiliency in adolescents, he finds that the single most important predictor of an adolescent positively weathering stress and attacks on self-esteem is connectedness to at least one competent adult. "Those adolescents who are able to resist the negative outcomes almost always have a high level of connectedness to family or other adults. . . . The most important thing is that the relationship has to be nonexploitative."

Psychologist Susan Harter agrees that adults have a strong influence on adolescents' self-esteem. "Recent findings indicate that . . . development is most likely to be promoted by adults who model, as well as encourage, the communication of a personal point of view that may be different from others' while simultaneously retaining an openness to the views of others. . . . We can capitalize on the penchant for emulation by providing a broad, diverse array of role models with whom it is acceptable to identify."

Role of schools and families

Resnick identifies "academic connectedness" as the second most important predictor of resiliency: "These adolescents were also able to identify school as an arena where they felt competent. And they often named one or two special teachers." Schools, then, also have an important role in positively affecting teens. Teachers are especially critical.

Resnick identifies two other key indicators of resiliency: spiritual connectedness and low levels of family stress. "By spiritual connectedness we mean either religiousness in terms of an established church or simply spiritualness in terms of some kind of higher being or higher order," he explains. And he emphasizes that low levels of family stress does not mean that the traditional idea of two-parent families is necessary. "We are talking about an absence of domestic violence and abuse, and absence of psychological separation of the parent or parents. Poverty can also be a strong stress factor in families."

This means that parents and other family members can do much to help young women believe in themselves. They must be aware of any biases they have and work to present girls with opportunities rather than closed doors. By providing positive role models and support, among other things, they can positively affect a girls' self-esteem.

Recognizing these four factors that help girls be resilient to adverse situations, we can also identify specific strategies for developing programs that will help girls improve their self-esteem. Susan Harter observes that in the past, most programs that have tried to directly work on self-esteem have not been helpful. Most programs now try to work on self-esteem in the context of some other issue, like math and science learning.

Shaping a resilient generation of young women

Self-esteem is critical to every part of an adolescent's and adult's well-being. The recent studies showing significant drops in teenaged girls' self-image should set off alarms among all of us. We do need to know more about specific groups of young women, especially concerning young women with disabilities, nonheterosexual teenagers, and class and racial/ethnic differences. Only by knowing what the differences are, can we draw out commonalities fairly.

But even prepared with appropriate statistics and studies, our greatest need is to understand exactly what self-esteem is and how to improve it. We need to be able to change systems and structures that damage or stifle young women's self-esteem. This, combined with an ability and knowledge of how to help individuals, regardless of their "category," will help us begin down that road to change.

... discussion of [sexuality] with young women generally deals with victimization by boys, disease, and problem pregnancy.

Sundra Flansburg
Education Development Center

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EVALUATION PROCESS

What is Evaluation Research?

Evaluation research is the systematic application of social research procedures in assessing the conceptualization and design, implementations and utility of social intervention programs.... Evaluations are systematic to the extent that they employ social science approaches to gathering valid, reliable evidence. (P. Rossi and H. Freeman, 1985)

To evaluate the local gender equity program, Wisconsin Model for Sex Equity in Career and Vocational Education (1993) suggests to consider the following components:

1. Collect statistical information
2. Follow up on student and staff surveys
3. Monitor each equity strategy or activity
4. Review the program periodically
5. Look for similarities
6. Apply the findings

The evaluation process is also comprised of the following key elements:

1. Clearly defined program goals
2. Measurable outcomes
3. Documentation
4. Evaluation design

The detailed materials can be found in Wisconsin Model for Sex Equity in Career and Vocational Education, Wisconsin Department of Public Instruction, 1993.

Evaluation of Participant Outcome

Participant outcome is the facet of evaluation that looks at the impact of the program on the participants; what has changed in the participant as a result of the program. Examples of questions that provide this information on outcome assessments might include: How much change has there been in the participant's level of knowledge? To

Participant outcome is the facet of evaluation that looks at the impact of the program on the participants; what has changed in the participant as a result of the program.

what extent has the participant's attitude changed? To what degree is the participant ready to consider a nontraditional career?

To ask appropriate questions, first the objective of the workshop or activity must be defined. Then questions are developed that will help ascertain if the objective has been accomplished. P.T. Ewell lists four areas of assessment outcomes in Student Outcomes Assessment: What Institutions Stand To Gain. New Directions For Higher Education. San Francisco, Jossey-Bass, 1987. The four areas are Knowledge, Skills, Attitudes and Values, and Behavioral Outcomes. The examples of assessments provided in this guidebook include surveys and questionnaires that assess participant's change in their perceptions, attitudes or behavior as a result of the program. In most cases, the instruments focus on knowledge, attitude and values outcomes. Many of the samples could be administered as pre/post test instruments. The instruments could also be used as after session outcomes assessments, asking the participant to indicate the degree to which the participant believes their knowledge, attitude and/or behavior has changed as a result of attending the program or workshop.

Evaluation of Program Outcome

The evaluation of program outcomes considers how successful the particular activity or workshop has been in achieving the program's goals.

The evaluation of program outcomes considers how successful the particular activity or workshop has been in achieving the program's goals. Some questions to accomplish such evaluation might include: How many attended? What were the strengths and weaknesses of the program? For participants, questions might include: What would you like to see changed? Would you recommend this program to others? How were the facilities? How clear were the materials? How knowledgeable was the presenter about the material covered?

Assessment Tools

What is Assessment?

Evaluation may be undertaken for a variety of reasons: for management and administrative purposes, to assess the appropriateness of program changes, to identify ways to improve the delivery of interventions, or to meet the accountability requirements of funding groups....
For all these purposes the key goal is to design and implement an evaluation that provides a firm assessment, one that would be unchanged if the evaluation were replicated by the same evaluators or conducted by another group. (P. Rossi and H. Freeman, 1985)

The assessment section of this part and other parts of the guidebook provides sample tools for both needs and impact assessment in equity awareness. Need assessment is an appraisal of type, depth, and scope of problems as perceived by study targets or their advocates. Impact assessment is an evaluation of the extent to which a program causes changes in the desired direction in a target population. (P. Rossi and H. Freeman, 1985)

Assessment of Gender Fair Climate

Directions: The following items are related to the gender equity in institutions/agencies/ organizations as a whole. It helps assess gender fair climate in our locality. Please answer the questions and return to us as soon as possible.

---

a) Based on your judgment/observation, to what extent are the following available at our institution/agency/organization?

	Code
1) Policy statements assuring accessibility to all students without regard to gender	___
2) Institutional documents include goals to serve males/females in creating an equitable environment	___
3) Reasonable and flexible class/lab schedules exist to promote access for nontraditional students	___
4) Gender balanced membership of program development and advisory committees	___
5) Linkages with institutions/agencies/organizations having potential pool of nontraditional students	___
6) Positive and equitable classroom environment exists for achieving nontraditional career goals	___
7) Coordination of services and support throughout institution to facilitate pursuit of individual non-traditional career goals	___

Codes:
0=Don't know
1=Not available
2=Somewhat available
3=Widely available

b) Based on your judgment/observations, to what extent do students, staff and faculty at our institutions/agencies/organizations generally demonstrate awareness and positive/negative attitudes toward men/women in nontraditional career programs?

	Code		**Code**		**Code**
Students	____	**Staff**	____	**Faculty**	____

Codes:
0=Don't know
1=Greatly aware and positive
2=Somewhat aware and positive
3=Neutral
4=Somewhat aware and negative
5=Greatly aware and negative

c) Indicate the number of times equity issues were addressed during a school/ program year at the following:

_____ **Advisory/craft/committee meetings**

_____ **Meetings/collaborative activities with community-based organizations and agencies**

_____ **Inservice sessions addressing equity issues, including disproportionate enrollment, sexual harassment, classroom and institutional environment**

Bibliographies

Gender Roles..93

Parent and Community Involvement...............102

Nontraditional Career Information..................104

Math and Science...116

Note:

All bibliographies are alphabetically ordered by **title**.

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Toward a Challenging Future

A Practitioner's Guide for Student Career Exploration in New York State

Part Two: Guidance and Counseling 2

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About Guidance and Counseling

Counselors need to create a climate that encourages all students to avoid gender role stereotyping when making career and life decisions.

The important role counselors play in the career choices of their students has been well documented. This section strives to provide those who counsel students with information and materials needed to create a climate that encourages all students to avoid gender role stereotyping when making career and life choices.

This section begins with the National Career Development Guidelines and recommendations for bias-free Career Guidance and continues with strategies and activities for use with students to foster self-awareness, confidence and necessary risk-taking for wise career choices.

Role models have been effectively used to promote exploration of nontraditional careers. Descriptions of several role model projects and examples of materials used by these programs are included.

The National Career Development Guidelines

NCDG are a competency-based approach to career development that helps states, schools, colleges and universities, and human service agencies to plan quality career guidance and counseling programs.

The National Career Development Guidelines represent a major nationwide effort to foster career development at all levels. They are a competency-based approach to career development that helps states, schools, colleges and universities, and human service agencies to plan quality career guidance and counseling programs. The Guidelines developed by National Occupational Information Coordinating Committee (NOICC) represent professional consensus in three main areas:

- Student/Adult Competencies and Indicators - Recommended student or adult outcomes are organized around self-knowledge, educational and occupational exploration, and career planning.

- Organizational Capabilities - The structure and support needed for quality programs include administrative commitments, facilities, materials, and equipment.

- Personnel Requirements - Counselors and other staff must have the knowledge and skills to deliver a quality program.

Primary Purposes

To provide guidelines for use by states, local educational institutions, and private organizations to:

- Strengthen career development programs at all levels.
- Enhance student/client achievement.
- Adopt state and local career development guidelines.
- Review and revise career development programs.
- Continue to improve career development through ongoing, structured evaluation.

Benefits of Career Guidance and Counseling Programs

Using the National Guidelines to improve programs will better prepare people for the changing workplace by increasing their understanding of the relationship between education and employment and improving their career decision-making skills.

Research affirms many benefits of career guidance and counseling programs for youth and adults. Using the National Guidelines to improve programs will yield the following benefits:

- Better prepare people for the changing workplace by increasing their understanding of the relationship between education and employment and improving their career decision-making skills.
- Increase accountability through regular assessment of student or adult achievement and evaluation of program components.
- Promote program coordination and articulation by defining a sequence of delivery and reinforcing learning from previous levels.
- Reduce individual risks by increasing school and program retention rates, promoting higher self-esteem, and improving social adjustment.
- Support educational excellence by increasing motivation and improving academic achievement.
- Enhance family involvement by helping parents understand how they can assist their children with career planning.

Quality Career Guidance and Counseling Programs

High-quality, comprehensive career guidance and counseling programs:

- Are identifiable but integrated with other program areas.
- Enhance career development knowledge, skills, and abilities.

- Are coordinated with other institutional programs and articulated with programs at other levels.
- Use coordinated activities such as counseling, assessment, career information, instruction, placement, consultation, and referral.
- Have a defined structure including qualified leadership, diversified staffing, resources, and effective management.
- Are accountable with evaluation that addresses both student/adult outcomes and program processes.

Benefits of Career Guidance and Counseling Programs

The National Career Development Guidelines initiative is funded by NOICC and endorsed by:

- American Association for Counseling and Development (AACD)
- American School Counselor Association (ASCA)
- American Vocational Association (AVA) Guidance Division
- Association of Computer-Based Systems for Career Information (ACSCI)
- Council of Chief State School Officers (CCSSO)
- National Association of State Career Development/Guidance Supervisors (NASCD/GS)
- National Association of State Occupational Information Coordinating Committees (NASOICC)
- National Career Development Association (NCDA)

To get further information, please contact:

National Occupational Information Coordinating Committee
2100 M Street, NW, Suite156
Washington, DC 20037

Phone: (202) 653-7680

NOICC
National Career Development Guidelines Competencies by Area and Level

ELEMENTARY	MIDDLE/JUNIOR HIGH SCHOOL	HIGH SCHOOL
Self-Knowledge		
Knowledge of the importance of self-concept. Skills to interact with others. Awareness of the importance of growth and change.	Knowledge of the influence of a positive self-concept. Skills to interact with others. Knowledge of the importance of growth and change.	Understanding the influence of a positive self-concept. Skills to interact positively with others. Understanding the impact of growth and development.
Educational and Occupational Exploration		
Awareness of the benefits of educational achievement. Awareness of the relationship between work and learning. Skills to understand and use career information. Awareness of the importance of personal responsibility and good work habits.	Knowledge of the benefits of educational achievement to career opportunities. Understanding the relationship between work and learning. Skills to locate, understand, and use career information. Knowledge of skills necessary to seek and obtain jobs. Understanding how work relates to the needs and functions of the economy and society.	Understanding the relationship between educational achievement and career planning. Understanding the need for positive attitudes toward work and learning. Skills to locate, evaluate, and interpret career information. Skills to prepare to seek, obtain, maintain, and change jobs. Understanding how societal needs and functions influence the nature and structure of work.
Career Planning		
Understanding how to make decisions. Awareness of the interrelationship of life roles. Awareness of different occupations and changing male/female roles. Awareness of the career planning process.	Skills to make decisions. Knowledge of the interrelationship of life roles. Knowledge of different occupations and changing male/female roles. Understanding the process of career planning.	Skills to make decisions. Understanding the interrelationship of life roles. Understanding the continuous changes in male/female roles. Skills in career planning.

National Career Development Guidelines, National Occupational Information Coordinating Committee (NOICC), Northwest Regional Educational Library, Washington, DC (1989)

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Recommendations for Reducing/Eliminating Sex-Bias in Career Guidance

Counselors - be aware that parents are the most influential source on career choice by students.

1. Look at your personal values concerning gender roles and stereotypes and how they influence your working with students, such as:

* conflict of family, careers and gender roles of the family members
* what maleness/femaleness is and the attributes (masculine/feminine) attached to each
* how you treat males/females as you work with your students in their career planning

2. Explore with students their values concerning gender roles and stereotypes and how they may influence career choices. Some principles to help clarify values:

* Unconditional acceptance of student.
* Give accurate information to all students, not advice (even when asked).
* Look at career choices from student's point of view, not counselor's.
* Use value sheets (group work) which gives a provocative situation and discuss the implications.
* Encourage students to explore challenging and non-traditional career options.
* Group exploration of appropriate careers by asking small groups about their choices as a male/female.
* Include parents in career plans and group activities (discussion).

Note: Parents are the most influential source on career choice by students

* Use career interest inventories to add to your available information on students. Check to see if measure is non-gender based or if it has male/female forms, and give both to students.

Strategies

To help infuse equity:

Show your students how sex biases can influence and limit their career options.

* Build a library of nontraditional careers including skill requirements, wages, opportunities for advancement, and entry requirements.
* Show how academic skills are relevant and applicable to multiple careers.
* Show how sex biases can influence and limit their careers options.
* Show that vocational education skills learned in the class can be modified and applied to a broad range of occupations.
*Give plenty of examples of males/females in all kinds of careers and today's role models.

Source: Counselor & Bias-Free Career Planning Programs Center, Education & Training Associates, Inc., 1993.

Careers

1. **What are some of the important decisions to make in choosing a career?**
    - a. Determine career interests
    - b. Learn the advantages and disadvantages of each career in which you are interested
    - c. Learn what is required to get a job in each career
    - d. Determine which career best matches your interests, abilities, talents, aptitudes, needs, and desires

2. **Why would I choose a nontraditional career?**

The salary, benefits, stability, work environment, and chances for advancement may be greater in a nontraditional career. If none of these are true, but the nontraditional job will satisfy you as a person, the nontraditional job may still be your best choice. Ideally a career provides all of the above.

3. **How would I choose a nontraditional career?**

By investigating all of your options and using all of your sources, you can find enough information about nontraditional careers to make your selection.

WHAT IF...?

Career Exploration Activity

OBJECTIVES

✦ To increase student awareness of the effects of gender stereotyping on individual lives

MATERIALS

✦ One index card per student

✦ Flipchart and markers, or chalk board and chalk

INSTRUCTIONS

✦ Pass out index cards and ask students to take two or three minutes to think and write about how their lives would be different if they had been born a member of the other gender. Suggest that they consider personal and career goals; skills; interests; expectations from family and society about their decisions and activities.

✦ If the group includes racial/cultural diversity, participants may be asked to respond to being a member of the other gender AND another race/culture.

✦ Divide students into mixed gender groups of three-to-six each. Assign alternate groups to brainstorm the benefits and drawbacks of being male or being female. (If necessary, explain to students that brainstorming is a way to get lots of information out quickly; encourage people to risk making imaginative suggestions without getting "shot down;" treat everyone's ideas with equal respect; allow one idea to build on another; etc.).

✦ Ask each group to select a recorder to write down the group's responses. Allow 10 to 12 minutes for this task.

✦ Ask the recorders to share each group's responses on the chalk board.

✦ Have the group rearrange the lists of benefits and drawbacks into categories, such as educational, personal, career, financial, etc. Discuss what individuals can do to overcome drawbacks to improve everyone's chances for success in both career and family goals.

Adapted from **Out of Bounds**, New York State Occupational Education Equity Center, 1992.

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Activity Sheet 1: Self Inventory

Directions: Complete the following by writing a brief description of yourself.

1. My characteristics as a career person:

My talents ______________________________

____

My skills ______________________________

____

My aptitudes ______________________________

____

My interests ______________________________

2. My personal values: ______________________________

____

____

____

3. My goals for a personal life:

____

____

____

4. My goals for a career:

____

____

____

Activity Sheet 2: Investigating a Nontraditional Career

Directions: As you research a specific nontraditional career, answer these questions.

Job title ____

1. What specific duties does this job have?

2. What kind of skills are necessary to fulfill these duties?

3. What physical requirements does this job have?

4. What aptitudes, strengths, and talents are required?

5. What is the work environment?

6. What are the responsibilities?

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7. What are the compensations?

8. With whom does a worker in this job interact?

9. What is the projected need for workers in this career?

10. Will work be available in the geographic area I want to live?

11. What training and/or education is needed to be qualified for an entry-level job in this career?

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Earnings: How Do They Vary by Occupation?

Each year the US Bureau of Labor Statistics estimates the average salary in various occupations. Here are the figures from the latest *Occupational Outlook Handbook* for selected fields. In some cases, such as physicians, the figure may be lower than normally quoted as averages include those just getting started in the field as well as established workers. Salaries are higher in metropolitan areas than in smaller communities.

Office Related

File clerk	$15,500
Secretary	$19,150
Telephone operator	$19,600
Credit clerk	$20,800
Office machine repairer	$22,900
Office supervisor	$26,520

Craft Related

Sewing machine operator	$15,800
Butcher	$16,450
Construction laborer	$16,900
Painter	$18,800
Carpenter	$21,200
Auto mechanic	$22,000
Bricklayer	$24,000
Machinist	$25,950
Electrician	$27,500
Tool and die maker	$32,100
Plumber	$37,500
Iron worker	$54,000

Retail and Hospitality

Cashier	$11,400
Waiter/waitress	$12,800
Apparel sales	$13,250
Cosmetologist	$14,250
Hotel clerk	$14,300
Janitor/cleaner	$14,650
Buyer	$25,450
Jeweler	$28,000

Data are based upon weekly wage averages times 50 weeks.

Service and Public

Social worker	$25,450
Clergy member	$26,800
Telephone operator	$27,500
Police officer	$29,100
Librarian	$29,900
Fire fighter	$31,800
Mail carrier	$32,250
Postal clerk	$34,000
Public administrator	$35,650

Health Related

Clinical lab technician	$25,950
Dietician	$26,850
Nurse, RN	$34,100
Occupational therapist	$35,600
Physician assistant	$41,000
Pharmacist	$45,000
Veterinarian	$63,069
Physician	$139,000

Technical Fields

Engineering technician	$28,800
Architect	$35,100
Biological scientist	$36,050
Computer programmer	$36,900
Chemist (BS)	$42,000
Computer analyst	$42,300
Actuary	$46,000
Operations research analyst	$50,000
Chemical engineer	$51,200
Engineer	$52,500
Chemist (PhD)	$60,000

Transportation

Cab driver	$18,700
Bus driver	$20,000
Truck driver	$23,350
Airline pilot	$55,650
Railroad engineer	$59,600

Other Business Related

Bank teller	$14,750
Insurance adjuster	$22,800
Real estate sales	$29,650
Insurance broker	$30,100
Accountant	$30,800
Personnel manager	$33,800
Securities broker	$40,300
Marketing manager	$42,550
Economist	$44,450

Education Related

Child care workers	$7,900
Elementary school teacher	$31,200
High school teacher	$33,000
College professor	$46,300
High school principal	$63,000

Other Professional

Newspaper reporter	$20,300
Photographer	$21,200
Artist	$24,550
Travel agent	$25,000
Reporter/editor	$30,700
Public relations worker	$32,000
Lawyer	$55,800

Minichart prepared by the *Career Opportunities News*, PO Box 190, Garrett Park, MD 20896.

Source: NYS Occupational Education Equity Center

How Much Do They Earn?

Persons planning careers should have a general idea about average annual earnings in their field. This chart shows the average salaries for workers in a number of occupations—not entry rates but for all currently in the field. Minimum levels of education required are also cited. However, in many cases (such as for flight attendants, physical therapists, or paralegal employees) additional education is common and an asset when job hunting.

High School Training

Bank teller	$15,200	Police officer	$32,900
Cashier	$11,700	Receptionist	$16,400
Construction worker	$19,700	Taxi driver	$16,200
Flight attendant	$26,300	Telephone operator	$20,100
Garbage collector	$18,800	Truck driver	$23,100
Mail carrier	$32,900	Waiter/waitress	$12,000 plus tips

Some College or Vocational School Training

Appliance salesperson	$23,300	Licensed practical nurse	$22,600
Auto mechanic	$21,900	Paralegal worker	$27,900
Computer repairer	$30,500	Preschool teacher	$18,400
Dental hygienist	$28,600	Secretary	$20,100
Funeral director	$36,500	Surveyor	$28,700
Hairstylist	$14,200	Welder	$23,600

Bachelor's Degree

Army officer (captain)	$43,800	Financial planner	$55,100
Bank officer	$43,000	High school teacher	$32,500
Civil engineer	$55,800	Pharmacist	$47,500
Computer systems analyst	$42,700	Physical therapist	$27,200
Electrical engineer	$59,100	Property manager	$26,600
Elementary school teacher	$31,000	Registered nurse	$35,700

Master's Degree

Geologist	$50,800	School counselor	$33,000
Hospital administrator	$36,000	School principal	$57,300
Librarian	$29,500	Social worker	$26,600
Management consultant	$61,900	Urban planner	$42,800

Doctor's or Professional Degree

Chiropractor	$77,000	Lawyer	$60,500
Clergy member	$26,000	Physician	$143,000
College professor	$45,000	Psychologist	$53,000
Dentist	$93,000	Veterinarian	$46,900

Minichart prepared by the *Career Opportunities News*, PO Box 190, Garrett Park, MD 20896.

Source: NYS Occupational Education Equity Center

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Occupations with the Most Favorable Outlook Today

Here are some of the fields that the US Department of Labor predicts will offer the fastest job growth in the coming decade. Some are small now and, even with rapid growth, will offer fewer jobs than some larger fields (nursing, teaching) where growth will be steady but not spectacular. For more information on these fields, consult the *Occupational Outlook Handbook* or the *Encyclopedia of Careers and Vocational Guidance*.

TECHNICAL FIELDS

Computer programmer—More applications creates demand for programmers.
Computer systems analyst—Growth driven by the need for more efficient systems.
Electrical engineer—More and more complex products on the way.
Mechanical engineer—Manufacturing machinery more complex and important.

HEALTH FIELDS

Dental hygienist—Population growth and more attention to teeth today.
EEG technician—Will grow along with other health fields.
Medical assistant—Will increase to relieve burden on physicians.
Occupational therapist—Rehab services due for sharp increase in demand.
Physical therapist—More long-term care, provided by health plans, will affect field.
Registered nurse—Health field will grow and nurses are a key component.
Respiratory therapist—More older people with cardiopulmonary diseases will cause growth.
Surgical technician—Growth in surgery will increase demand.

EDUCATION FIELDS

Accounting/finance professor—With PhD and some experience strong business school demand.
Elementary teacher—Enrollments will grow and class sizes may decline.
Secondary school teacher—Retirements will stimulate demand in coming years.
Science teacher—Demand in high schools for fully qualified. Surplus at college level.
Speech pathologist—Will grow along with other health and education fields.
Teacher aide—More students and expected greater reliance on aides.
Teacher, learning disabled or emotionally disturbed—Trained special education teachers find ready demand.

BUSINESS FIELDS

Cashier—Retailing is growing and all stores use cashiers.
Receptionist—New and expanding businesses will need receptionists.
Securities sales worker—Investing is popular and is expected to grow.

OTHER FIELDS

Actuary—Growing number of complex insurance policies.
Bus driver—School and intercity routes growing.
Computer and peripheral equipment operator—More operators needed for complex business systems.
Data processing equipment repairer—More systems in operation will create demand.
Psychologist—Focus today on mental health and aging will create jobs.
Tool and die maker—Relatively few trained workers means jobs for the skilled.

Minichart prepared by *Career Opportunities News*, PO Box 190, Garrett Park, MD 20896

Source: NYS Occupational Education Equity Center

NEW FRONTIERS STARTLING STATEMENTS

Choose the correct letter for each of the following statements.

1. ______________ percent of American women, ages 20 and over, work in the labor force.

A. 63 percent B. 53 percent C. 43 percent

2. ______________ percent of American men, ages 20 and over, work in the labor force.

A. 87 percent B. 78 percent C. 68 percent

3. A high school female can today expect to spend an average of ______ years working for pay.

A. 10 B. 22 C. 34

4. _____ out of 10 high school females can expect to be employed for some time.

A. 1 B. 4 C. 9

5. The average teenage male can expect to spend an average of _____ years working for pay.

A. 32 B. 38 C. 43

6. ______million families are headed by women who are widowed, separated, divorced or never married.

A. 31 B. 6 C. 10

7. The traditional concept of the American family is a father who is wage-earner and a mother who remains at home caring for two children. ______ of families conform to tradition.

A. less than 10 percent
B. about 25 percent
C. about 35 percent

8. Woman are concentrated in ___________ occupations.

A. Clerical
B. Machine operatives
C. Professional and technical

9. Men are concentrated in _________________occupations.

A. Administrative and management
B. Professional and technical
C. Craft and craft-related

10. _____ percent of all families are maintained solely by women.
A. 10 B. 16 C. 23

NEW FRONTIERS STARTLING STATEMENTS

ANSWERS

1. A. 63 percent
2. A. 87 percent
3. C. 34
4. C. 9
5. B. 38
6. B. 6
7. A. Less than 10 percent
8. A. Clerical
9. C. Craft and craft-related
10. B. 16

Source: Administrator's Guide to Bias-Free Classroom, CETA, 1993.

MORE STARTLING STATEMENTS

1. How many times can a student who has just graduated from high school expect to change "career clusters?"

2. How many times can a student who has just graduated from high school expect to change jobs?

3. What is the (national) average age of the community college student today?

4. What percentage of students enrolled in community colleges today have already obtained a college degree (four year)?

5. In the year 2000, what percentage of jobs will require high school and further training (1-2 years), but no bachelor's degree?

6. What percentage of students who graduated with a four-year college degree in 1994 are working in the fields which they majored?

7. In the year 2000, what percentage of jobs will require highly technical skills?

8. In 1959, for every dollar a man earned, a woman earned 59 cents. By 1995, for every dollar a man earned, a women earned _____ cents.

9. When men and women in the same jobs are compared, women typically earn ______% of what men earn.

10. The Glass Ceiling Commission found that white males comprised _____ % of senior managers of Fortune 1000 companies.

Source: Cattaraugus-Allegany-Erie-Wyoming BOCES

More Starting Statements
Answers

1. 3 to 5
2. 12 to 15
3. 30
4. 30%
5. 75%
6. 42%
7. 8%
8. 75.5
9. 90%
10. 97

Career Awareness Activity: "Consider the Possibilities"
Gender Equity Program*
Orange County Community College

Description: Brain-storming session in which participants develop a list of jobs which are related to their "dream careers"

Time: 20-45 minutes depending upon size of group. Can also be assigned as an out-of-class research project.

Age Level: Grades 3-adult

Objective: To encourage positive and enthusiastic exploration of not-so-obvious and nontraditional careers

Materials: Chalk board and chalk, or flip chart and pen

Procedure:

1. Ask participants how they spend their free time, what they watch on TV, what activity do they think is the most fun? Ask how many would like to have a career in sports...entertainment... fashion...(glamour careers)

2. Write results on board or flip chart

3. Have class develop a list of jobs associated with each dream career:

   movies -- camera , light or sound technician, script writer, caterer, costume designer, wardrobe coordinator, location scout, animal trainer, film editor, special effects engineers...etc. We found out that a local company developed a unique type of stage and film lighting and they provide most of the industry with its illumination. We were able to tell our workshop participants about the engineer (a female!)who travels between Broadway and Hollywood selling and troubleshooting these lights.
   sports -- groundskeeper, stadium management, ticket promotion, equipment (design, sales and management) sports photographer, trainer, nutritionist, public relations , TV technician (camera, lights, sound) .

The possibilities associated with high-profile, glamorous careers is almost endless. Too often , young people are not exposed to exciting jobs nor people who are **excited about their jobs.** This activity is an opportunity to get kids (and adults) to think positively and enthusiastically about their career possibilities. Good luck!

*** The Gender Equity Program is funded by a Vocational and Technical Education Act grant through the New York State Education Department**

Education-Related Field Trips

- Take girls to an Expanding Your Horizons conference in your area. This is a highly recommended strategy. (See Resources for more information.)
- Sign your school up to participate in a Women and Engineering program at your local college or university.
- Take girls to visit college math, science, and technology facilities and sit in on a class or two. Have faculty or female students speak with them about scholarships and even post-graduation job placement help. Arrange for female college students to lead the tours. If you have too many girls to tour together, place friends in the same tour group.
- If your state has a residential Science and Math school for gifted students, take some girls on an overnight field trip. Meet with girls who go to the school. Attend a couple of classes. Speak with a couple of teachers. Stay overnight in the dorm if possible.

Employment-Related Field Trips

- Arrange visits to organizations such as research and educational centers, high-tech companies, an earthquake research center, a TV station, a hands-on science museum, a tour of a naval ship, a textile plant, etc., with tours conducted by female employees.
- Arrange a career-shadowing program with women scientists and engineers.
- Take girls to visit several ordinary offices to see the impact of technology on everyday work life.
- Take girls to the local airport to explore the use of computers in the aviation industry and learn about career opportunities.

Other Field Trips

- Have teachers nominate girls to participate in a tour of a superconducting computer center.
- Take girls to a science museum.
- Send a female student to represent the school at a meeting on math and science for students.
- Take girls on an Outward-Bound-type trip to build self-confidence.
- Take girls to a video parlor. Who do they see there? What do the games emphasize? What lessons can be drawn?
- During a class trip to Washington D.C., visit the National Museum of Women in the Arts.

Source: Lifting the Barriers, Jo Sanders, 1994.

Gender Equity Tip Sheet

Recruiting Women for Male-Intensive Tech Prep Programs

Key Elements of Successful Programs

1. **Extensive and active recruitment program**
2. **Strong intra- and interagency collaboration**
3. **Complete range of student support services**
4. **An integrated curriculum that includes hands-on training and varied high-tech activities**
5. **Adequate work experience opportunities, effective job placement services and a follow-up program**
6. **Nontraditional students are exposed to role models**

Recruitment Strategies

- **Develop summer orientation programs in which males participate in traditionally female programs and females participate in traditionally male trade areas.**
- **Advertise in school publications inviting females to call for information about a traditionally male program.**
- **Encourage female students who are currently enrolled in nontraditional occupational programs to assist recruiters during high school recruitment fairs.**
- **Compile a list of financial aid assistance available for females interested in entering nontraditional programs.**
- **Include representations of nontraditional females in audio-visual, instructional and orientation materials used during recruitment fairs and career days.**
- **Identify and visit female students who are potential students in nontraditional programs before their enrollment in high school.**
- **During recruitment fairs, address the fear of peer and family disapproval with females who are potential nontraditional program students.**
- **Encourage parents to play a strong role in supporting their daughter's career choice.**
- **Arrange job-site visits and experimental work experiences to introduce female students to nontraditional careers.**
- **Design curriculum for career classes at the junior level to reflect a variety of occupations.**
- **Establish a mentor network for women interested in entering nontraditional occupations.**
- **Provide employability skills information through presentations in required high school vocational courses in order to reach *all* women students in target programs.**
- **Provide effective occupational counseling. Women need labor market and occupational information. Which jobs are in high demand? What are the duties, advancement opportunities, salary and training options?**

Sources: Center for Education Research and Development, University of Central Florida, Orlando; TASPP Brief, Volume 5, No. 1, National Center for Research in Vocational Education, University of California, Berkeley

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Ways to Keep Women from Dropping Out of Nontraditional Programs

Successful Tech Prep Clusters Should Identify

1. The desired mix of students to be recruited and admitted
2. The level of academic performance desired from the various groups of students recruited, admitted and retained
3. The rate of persistence expected and desired among the student groups
4. Support services that address the areas of greatest student anxiety, frustration and need

Retention Strategies

- Send introductory letters to female students in nontraditional programs to welcome them and apprise them of the support services available.
- Assist students in identifying one person (relative, friend, instructor) who is supportive of their nontraditional career path.
- Provide and encourage participation in support groups so that nontraditional students can meet, share problems, concerns and successes.
- Disseminate monthly and quarterly newsletters to all females enrolled in nontraditional programs.
- Offer shadowing experiences with nontraditional workers in the field.
- Encourage student participation in related professional seminars and state and national vocational organizations.
- Eliminate any stereotypical instructional materials from the classroom. Ensure that classmates do not "squeeze out" nontraditional students from viewing laboratory demonstrations or engaging in group assignments.
- Enforce fair and consistent discipline, dress standards, safety regulations, achievement expectations and grading procedures.
- Offer stamina-building and weight lifting classes to female student in nontraditional programs.
- Offer tutoring to students in nontraditional programs who may need to "catch-up" due to lack of preparation for the subject matter. Consider offering a pre-entry course on technical tools, terminology and skills.
- Establish a policy that advises students to meet with an advisor before withdrawing from a nontraditional program.
- Provide on-site child care, transportation, and assistance with textbooks and other required educational materials, tools and uniforms.
- Sensitize teachers to the effects of bias, stereotyping and discrimination on students. Do they make a conscious effort to call on male and female students in an equitable manner? Do they use the same tone of voice when speaking to students of both sexes? Do they discourage harassment of nontraditional students?

Sources: Center for Education Research and Development, University of Central Florida, Orlando; TASPP Brief, Volume 5, No. 1, National Center for Research in Vocational Education, University of California, Berkeley

Mentoring Institutional Equity Programs

This initiative of institutional equity involves a process, not a project, but a process that needs to be strengthened and nurtured by commitment to equity.

This New York State initiative used a structure of support for colleges to allow application and implementation of the EEO model within a two-year period. The effort was designed to facilitate gender equity not only in classrooms but in the policies and practices within the very fabric of the institution. This initiative of institutional equity involves a process, not a project, but a process that needs to be strengthened and nurtured by commitment to equity within all aspects of the teaching-learning environment.

To date, it has directly impacted 11 two-year colleges in New York State, bringing about increased awareness, understanding and sensitivity to those barriers that limit women's access, effort and achievement. Equity action plans have been designed to reduce identified barriers, and these plans are in progress at 11 participating colleges. In addition, a field-based consortium of eight SUNY colleges in the Mid-Hudson Region addressed equity in the classroom through a network of information, knowledge, ideas, mutual support, sharing, exchange and inservice activities.

The seven-step long-term EEO strategy, to increase recruitment and retention of students in nontraditional career programs, stated goals of:

Model Description

- Identifying barriers to enrollment
- Planning activities to address barriers
- Building support within community consistent with institutional efforts
- Institutionalizing equity activities to become mainstreamed with ongoing operations

This is an excellent example of institutions seeking to erase inequity — within all aspects of the teaching-learning environment — from the roots of American colleges and universities.

The seven steps of the model included:

Step 1: Build a Team
Step 2: Assess the Institution
Step 3: Identify Barriers
Step 4: Select Strategies
Step 5: Develop Plan
Step 6: Implement Plan
Step 7: Evaluate

To better reflect the needs of postsecondary institutions, goals were restated as:

(1) to identify specific barriers to enrollments in nontraditional programs by male and female students
(2) to identify/implement actions toward those barriers
(3) to build support within the comprehensive community consistent with institutional efforts
(4) to institutionalize equity activities into ongoing college operations.

The seven steps of the original EEO model were maintained but grouped into four phases as follows:

A. Organization Phase
Step 1: Building the Team
B. Start-up Phase
Step 2: Assessing the Institution
Step 3: Identification of Barriers
Step 4: Selection of Strategies
Step 5: Development of Local Equity Action Plan
(Timeline: Year 1)
C. Implementation Phase
Step 6: Implementing the Action Plan
D. Assessment Phase
Step 7: Evaluation and Feedback
(Timeline: Year 2 & Ongoing)

Initiative Procedures

These sessions promoted shared experiences, ..., and reinforced the postsecondary network for institutionalizing equity.

Five colleges experienced in applying the EEO model and six colleges new to the strategy worked together to expand and strengthen the statewide network of postsecondary institutions systematically working toward institutionalization of equity.

To support local efforts at these colleges, a series of inservice workshops were held to facilitate the application of the model, and the development and implementation of local equity action plans. These sessions promoted shared experiences, provided a forum for mutual support, defined and developed peer relationships and support, provided information/training regarding selected equity issues, and reinforced the postsecondary network for institutionalizing equity.

A focus of equity in the classroom was addressed by the Mid-Hudson Consortium of SUNY colleges. Chief Academic Officers served as advisors and faculty representatives from eight colleges functioned as a Steering Committee that identified and implemented activities to promote equity in regional classrooms. This effort served as the basis for continued regional networking, planning, development and implementation of a variety of inservice and cooperative activities.

For further information contact Liz Gottlieb at (914) 341-4891

What ♀ makes girls shun science?

In search of that missing 23%

by Ioannis Miaoulis

Why aren't there more women engineers? Why don't more girls seek careers in the physical sciences? As I start to explore ways to increase the numbers of female applicants to Tufts' College of Engineering, I search for answers. The answers are not black and white, but there are clues everywhere.

I witnessed one of those clues in Tufts' own engineering laboratories. The College of Engineering, in conjunction with the Department of Education, has been hosting a series of teacher workshops designed to help elementary school teachers bring exciting science projects back to their classrooms.

The teachers worked in teams led by graduate students who served as technical advisers. One team of female teachers was led by a female graduate student. The neighboring team was led by a male student.

The female teachers in the team would turn to the male student whenever they had technical questions, even though their own technical adviser was actually more qualified to answer their questions. And whenever they needed someone to empty a bucket of water or do any cleaning-type job, they asked the female student. When I saw this, I started getting scared about the environment in which our daughters are growing up.

I have two young daughters. When I try to see what scientists must seem like to them, I wonder why anyone would want to become a scientist. In commercials, movies, even on "Sesame Street" and "The Muppet Show," the scientist is weird. He's a white male, usually ugly, wearing thick glasses and carrying 16 pens in his shirt pocket. Half the time, he's trying to destroy the universe.

Maybe that's just a harmless comic character. But young people would benefit from equal exposure to real scientists who can show them what being a scientist is all about.

Start early

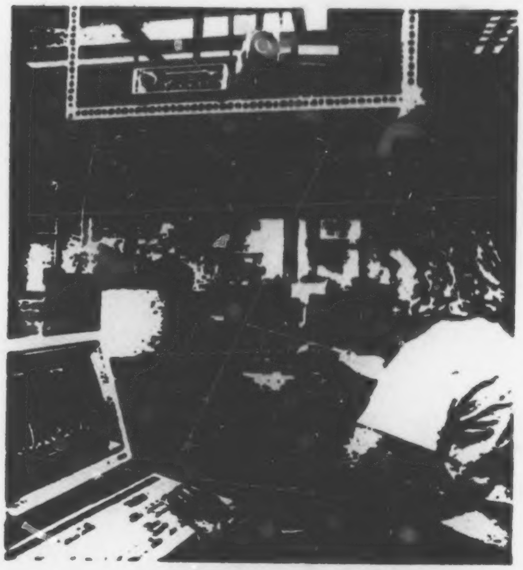
In the younger grades, especially, it's important for girls to have a role model or mentor who is fairly close to them in age. Female role models in the sciences are still presented in the form of black-and-white posters of Amelia Earhart and Marie Curie. Girls must think of these women as their grandmothers' contemporaries, not theirs.

For high school girls, a 25-year-old computer programmer would do far more for the image of women engineers than would a 90-year-old Nobel prize-winner.

Especially in adolescence, girls as well as boys don't want to be associated with the nerd-like image of scientists. They should meet scientists who are successful and popular, fun and social, who lead normal lives and look like the regular people they are.

So there lie some of the clues, and here are some of the issues: Beginning around the seventh grade, boys score somewhat higher on achievement tests, particularly on tasks requiring higher-level cognitive skills. How much does this have to do with teachers' attitudes? There have been studies indicating that both male and female teachers call on boys more often to answer math and science problems and give them a longer time to answer.

> **Female role models in the sciences are still presented in the form of black-and-white posters of Amelia Earhart and Marie Curie. Girls must think of these women as their grandmothers' contemporaries, not theirs.**



The College of Engineering has set a goal of encouraging more women to consider careers in engineering and other sciences.

Photo by J.D. Sloan

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Because misconceptions die hard, it's important to start dealing with them before they get a foothold. Even 3-year-olds have strong notions about "appropriate" activities for girls and boys.

Teachers can make a big difference. Through programs and workshops at the College of Engineering, we hope to improve teachers' attitudes toward girls' scientific ability and toward science and engineering in general.

A place in the world

The College of Engineering is missing 23 percent of its potential students. Twenty-seven percent of our students are female, but 50 percent of the population is female. Where are those missing applicants?

According to a study published recently in the journal *Adolescence*, high school students make career choices based on beliefs about themselves, their abilities and the relative values they attach to different careers. The study pointed out that girls are not only making career choices — they also are making choices about the kind of life they would like to live.

Even college-bound girls in high-level math and science courses in the study already were weighing a high-profile, "masculine" career such as engineering against the perceived responsibilities of marriage and family. These girls realized that society is not set up to make life easy for women who have families and work full time — another complex issue in itself.

In comparison with other engineering schools, Tufts is actually doing fairly well in attracting female students. The national average is about 14 percent female. Tufts' enrollment is 27 percent female. To encourage more women to choose an engineering career, Tufts provides its female graduate students with young families a more flexible environment in which to pursue their studies.

Women — and men — applying to engineering schools appreciate the fact that Tufts' engineering college has strong ties to the liberal arts. Students can move easily between the two colleges, and engineering graduates often go on to careers in medicine, law and international relations. Here's an example of why I think Tufts engineering appeals to women.

As part of one of the projects we do with elementary school teachers, the teachers asked their students to make technical drawings of the bicycle components they had just assembled. The boys' technical drawings, which depicted the bicycles and labeled the components, were quite good. The girls' technical drawings also were good — and included pictures of themselves, their dogs and the sun.

That's what Tufts engineering is like. It places engineering in the larger context of the world around it.

Expanding awareness

But how can young women decide that engineering is an attractive career if they don't even know what engineering is? One way to familiarize girls with science careers is to provide them with mentors at a very young age.

For elementary school girls, a mentor might be a middle school student who enjoyed doing a project for a science fair. For middle school students, mentors might be high school girls who excel in science and math. For high school girls, it could be college students and graduate students, and for college students, it could be young professionals.

Cynthia Madras, G96, left, engineering dean Ioannis Miaoulis and Sara Rosenberg, E93, G96, examine the shingled layers of butterfly wings on screen. Their research is attempting to borrow a design from Mother Nature to improve the manufacture of electronic components.

Photo by Mark Morelli

Tufts is developing a program through which every female engineering student would be connected with an engineering alumna in industry.

As a start, last summer, Stephanie Kelley and Sarah Cobleigh, who both live in Stow, Mass., and are juniors at Nashoba Valley Regional High School, were the first to take part in a model program at the College of Engineering aimed at interesting young women in science careers.

They worked side by side with Tufts students in the Comparative Biomechanics Laboratory. They created a science activity for preschoolers and tested laboratory exercises for a new engineering course. They said they had a great time and learned what engineering is all about.

Education is a key

Much of the time, problems stem from ignorance more than bad will. We have to sensitize people to the fact that negative attitudes toward women's science and math abilities are far from extinct. I have found that once individuals are aware of the problems, they can be very helpful in moving in the right direction.

During our search for answers as to why more girls don't choose science, we have stumbled into a morass of issues, some of which are as old as human civilization. Some will take a major reordering of society to deal with; some are simple. The point is we have to be on the lookout for the clues. Maybe we'll come closer to uncovering a portion of that missing 23 percent who have the potential to be good engineers, but never thought that engineering was for them. ●

Ioannis Miaoulis is dean of the College of Engineering. An associate professor of mechanical engineering, he earned his undergraduate and doctoral degrees in engineering and a master's degree in economics, all from Tufts.

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VOICE

Division of School Support Services / Albany-Schoharie-Schenectady BOCES

Volume XIV , Number 1

March 1993

issues in creating equality

Role Models Speak Louder Than Words

One of the main barriers to attracting more female students into math and science is the shortage of positive role models in these fields.

Many young women are receptive to our assurances that "girls can do anything." Many of them even internalize this message enough to repeat it to each other and to their male peers. **But, in terms of real influence on academic and career decisions, "Role models speak louder than words."**

Teachers, parents, community members, famous women, historical figures, older students, and recent graduates can all serve as positive role models. **The key is that they must be presented in such a way that young women can--and want to--identify with them.**

Since research tells us that girls learn best in an atmosphere of social connectedness, we suggest that **the most effective role model will connect with her audience as a "real person" who is working in a real job.** She should be ready to discuss, not only what she does on the job, but the impact that the job has on her private and family life, her interests and life goals.

When a role model is able to establish this kind of personal and professional connection, her audience can begin to imagine how various careers would impact their lives. And the connection is often mutually beneficial: **Sharing her experiences with young women to expand their academic and career options can be very satisfying to a woman who realizes the benefits of keeping those options open.**

PRESS RELEASE
Congratulations

Publicity Is Essential

Ongoing publicity is essential to provide recognition for women studying or working in math, science, and technology-based fields, and to encourage younger women to enter these traditionally male-intensive fields.

Students As Role Models

Sometimes the most effective role models are older students who are enrolled in math and science courses. They can usually relate easily, and convincingly, to younger students. **If you are fortunate enough to have female students in your programs, make the most of the opportunity:**

■ **Ask student role models for help as recruiters, speakers and tutors.** Ideally, they might earn a stipend for their work. If this is not possible, they will at least earn the appreciation and "status" of respected volunteer workers.

continued

Student Role Models continued

■ **Invite them to participate in career days or career exploration activities.** Set up meetings for them to discuss with your recruiters and counselors the factors which have influenced them in their choices. Request permission to use their photographs in public relations and recruiting materials.

■ **Make sure that they receive public recognition for outstanding work by participating or replicating the Equity Center's VANGUARD Award.** The **VANGUARD Award** recognizes both male and female students who are enrolled in vocational education programs which are not traditional for their gender. Female students in technical programs are, therefore, specifically targeted for recognition in this award. (See below.)

If your vocational programs do not yet have female participants who can serve as role models, try to borrow female students from nearby technical programs to help you.

The VANGUARD Award: A Search for Student Role Models

Last month, the **Equity Center** invited vocational programs in New York State to participate in the first annual **VANGUARD Student Recognition Award.**

This annual award is being established to identify and encourage outstanding students in vocational education programs not traditional for their gender. These students are "in the vanguard" of vocational education as we move toward the year 2000.

Public recognition activities connected with the VANGUARD Award are designed to highlight nominees as role models for other students. Locally, each nominator will receive a public relations packet with suggested strategies for local recognition. Statewide, six-to-twelve students will be selected to be featured in a poster campaign focusing on nontraditional and technical careers. (The **flyer on page 4,** which emphasizes the importance of technical job skills, is actually a reduction of one of these 17" by 22" posters. Photographs of some of the students will be incorporated into the "fill-in-the-squares" design to strengthen its appeal.)

As the **Equity Center** builds up a photographic portfolio of nontraditional students, we will be sharing this material with vocational education programs in several different formats, including inserts in this newsletter. ✔ **For more information and sample materials, use the request coupon on page 7.**

Teachers As Role Models

Female science and math teachers, and classroom teachers who are responsible for these subjects [illegible] the early grades, are obviously among the earliest role models for young girls. Less obvious is the positive role that all female teachers can play by making it clear that math and science skills are important for everyone. **Teachers who have avioded mathematics and science in their own education have to be careful not to be, as Sheila Tobias describes, "counter-role models" who subtly model or condone math avoidance to their students.**

A Note to Administrators About Role Models

Administrators have a unique opportunity to introduce new role models into the school environment. New faculty and staff members, graduation speakers, contractors, assembly presenters, etc., can be very positive role models for students who need to be encouraged to aim higher and work harder.

Inviting Role Models Into The Classroom

Visits by women and minorities working in math-based fields can be valuable for both students and teachers. By developing a routine procedure for scheduling and conducting each visit, teachers can minimize the extra work for themselves and maximize the experience for everyone involved. Role models can be invited throughout the year in a way which supports the curriculum in all of the content areas, while introducing students to a variety of careers.

Locating Role Models

With a little imagination, you won't have to look far for female and minority role models in math and science careers. Good sources include: parents of students; your everyday contacts among tradespeople, health care workers, bank personnel, etc.; public relations offices in utilities and other large companies; professional and trade organizations; and computer departments of colleges and government agencies. As noted earlier, successful high school students make excellent role models.

And, finally, watch out for those "teachable moments" when you can invite people you notice doing nontraditional jobs to talk about their work—either spontaneously, or at a later date.

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Career Ladders

When selecting role models to meet with students, remember to highlight careers which require varying amounts of education and training. This will help identify career ladders and offer realistic goals for all students. **For example, here is a good example of a career ladder:**

✔ It is possible to become a **robotics operator** if you have a high school degree. (Sometimes you also need a certificate of additional training.)

✔ If you go on to earn a two-year college degree while you work in this job, you could become a **robotics technician.** You would then assemble, troubleshoot, repair, and modify the robots--and earn a bigger paycheck.

✔ If you continued your studies to earn a four-year degree in engineering, you could be promoted to become a **robotics engineer** who designs parts and instructions needed to build a robot.

Inspiration, Not Intimidation

Carol B. Shmurak* describes a significant experience one school had in working with math/science role models: They found that a visit from a competitive, and intimidating, Nobel Prize winning scientist simply reinforced the inaccurate view that only brilliant and aggressive females can achieve anything in science. Student response was much more positive after visits from two successful female chemists who said that they had received "C's" in their first year college chemistry course. The students found it encouraging to think that these successful women had been able to overcome initial difficulties in their studies.

***Education Week**, Vol. 5, No. 33, May 7, 1986.

Preparing the Role Models for the Meeting

The initial invitation to come into the classroom, whether made by telephone or in person, should discuss both:

■ **The obvious**, such as date, time, location, parking, physical set-up, length of time, financial arrangements, emergency telephone numbers, etc.

■ **The other essentials** which promote success, such as age and interests of group; a preview of questions which might be asked; possibilities for follow-up job site visits or shadowing experiences.

Preparing Students for the Meeting

Always prepare students ahead of time for the question period. Help them phrase their questions appropriately, and **make sure that they plan to ask:**

✔ What is a typical day on your job like?
✔ What parts of your job are enjoyable? difficult?
✔ What is the salary range for work such as yours?
✔ What are the chances for promotion?
✔ How do you use math, science, and computer skills in your job?
✔ What is it like to be a women/minority in this job?
✔ What kind of education or training is needed?
✔ When you were in school, did you think about what work you were going to do?
✔ How did you decide on this particular job?

food for thought

It is time that successful professional women shift gears and begin the second part of their lives--mentoring, teaching and supporting young women, teens and girls. They are the future, and they desperately need positive role models.... Professional women should be replacing rock-music and TV stars, actresses and models for young women--especially teens...**This generation, for the most part, had no mentors. They know how difficult it is to succeed without them.**

FROM: Megatrends for Women (See page 6.)

"**It was with a sense of shock and then a deep, knowing sadness that we listened to the voices of the girls tell us that it was the adult women in their lives that provided the models for silencing themselves and behaving like "good little girls."** We wept. Then the adult women in our collective girlhoods came into the room. We could recall the controlling, silencing women with clarity and rage, but we could also gratefully recall the women who had allowed our disagreement and rambunctiousness in their presence and who had made us feel whole. And we recognized what it was we had to do as teachers and mothers and therapists and women in relationship. Unless we, as grown women, were willing to give up all the "good little girl" things we continued to do and give up our expectation that the girls in our charge would be as good as we were, we could not successfully empower young women to act on their own knowledge and feelings."

FROM: Meeting at the Crossroads (See page 6.)

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TECHNICAL JOB SKILLS

can make a difference

- ✓ Bigger Paychecks
- ✓ More Interesting Work
- ✓ Better Job Opportunities

ask your counselor about opportunities for you

THE EQUITY CENTER

47 Cornell Road
Latham, New York 12110-1402
518-786-3211
VATEA #8010-92-5096

THE EQUITY CENTER

MOVING INTO ACTION

Services for NYS Educators

New York State Educators can request assistance from the Equity Center in the following areas:

- "institutionalizing equity" to increase career options for all students
- Creating an equitable classroom climate
- Mathematics and equity: the career connection
- Innovative approaches to career exploration for women and girls
- Providing access to higher-wage technical and nontraditional careers for women and girls
- School-based child care
- Addressing the specific career preparation needs of women, minorities, the disabled, single parents, displaced homemakers and single pregnant women.

✓Please use the coupon on page 7 to request information about staff development, technical assistance and resources available from the Equity Center on these issues.

Equity Graduate Course: Semester II

Students in the **Achieving Equity in Education** graduate course offered in Buffalo and Plattsburgh are having a busy second semester. In addition to regular classwork, they will be implementing team projects developed last semester to create a more equitable learning environment in their home districts. Participants will earn six tuition-free graduate credits from SUNY Albany Department of Educational Theory and Practice for their two semesters of work.

✓For more information, contact instructors Barbara Ring or Craig Flood at 518-786-3211.

Career Challenge Training Institute

A training to prepare counselors and program coordinators to conduct the Career Challenge program will be offered August 9-13.

The **Career Challenge** is a counseling program for re-entry women adapted from the adventure based counseling model developed by Project Adventure, Inc. With an emphasis on personal risk taking and goal setting, **Career Challenge** addresses the needs of women preparing for nontraditional technical and trade occupations.

Cost for this week-long intensive workshop will be approximately $500 for the week. This includes room, board and training materials. Participants are responsible for their own travel expenses to the Albany area. **✓ For more information, contact Sandra McGarraugh at 518-786-3211.**

Inservice Training Offered for Teachers of Adult Students

Working with the Adult Learner: Empowerment through Employability is an inservice training which can be scheduled onsite at local agencies. Designed specifically for occupational education teachers of adult students, this offering is an opportunity to:

- Explore the educational and psychological needs of adult re-entry students
- Develop skills and confidence to adapt their own teaching styles to accommodate both adult re-entry students and teens
- Design classroom strategies to help adult students increase their employability skills, such as leadership, teamwork, communication, etc.

✓ For more information, call Julie Niedhamer-Tenan at 518-786-3211, or indicate your interest on the return coupon on page 7.

The Challenge of Mailing Lists: If your copy of VOICE has a large mailing label, (4" x 1.5"), you may find that address corrections take a long time. These labels are provided to us from an extensive State Education Department list which we do not maintain ourselves. Thank you for your patience while corrections are in process.

THANK YOU to the reader who found an error on page 5 of the June 1992 issue of VOICE. The correct information appears below:

An extra $500,000...
That could do a lot to change your life.

Women and men with specialized technical training can expect to earn half-a-million dollars more in their lifetime than someone who is working in a low-skill, minimum wage job.

A skilled worker might might earn:	An unskilled worker might earn:
$ 14 hourly	$ 4.25 hourly
$ 560 weekly	$ 170 weekly
$29,120 yearly	$8,500 yearly

If you work for 25 years, the difference between skilled and unskilled jobs comes out to be about half-a-million dollars. That could give you the kind of financial security you want for yourself and your family, the kind of house that meets your needs, the kind of car you want to drive.

Ask your guidance counselor about getting into a tech prep or vocational/technical training program

Why not try to earn an extra $500,000?
That could do a lot to change your life.

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Dr. Craig Flood, Project Director
Margaret Waterson, Editor

The project is implemented by the Division of School Support Services/Board of Cooperative Educational Services, Sole Supervisory District of Albany-Schoharie-Schenectady Counties, 1015 Watervliet-Shaker Road, Albany, New York 12205. The BOCES does not discriminate on the basis of race, color, national origin, creed, gender, age, or disability, and is in compliance with Title IX of the Education Amendments of 1972 and with Section 504 of the Rehabilitation Act of 1973.

The Compliance Officer for Title IX and Section 504 is Dr. Ruth Kellogg. She is available from 8:00 a.m. to 4:00 p.m. weekdays at the above address. Her telephone number is 518-456-9215.

resources for educators

The **Oc. Ed. Equity Resource Center** contains more than 2,500 print and audio-visual materials on issues related to gender equity in education. NYS educators are encouraged to borrow these resources free of charge throughout the year.

Borrowers may request specific titles or indicate general topics of interest, such as:

- adventure-based counseling
- equity in education
- math, science, & technology
- nontraditional training
- equitable career counseling
- cooperative learning
- employment & training
- career exploration
- pregnant/parenting teens
- teen fathers
- dropout prevention
- child care
- single parents
- displaced homemakers
- parenting/families
- women in management
- sexual harassment
- law and legislation
- women's history
- women & the U.S. constitution
- women & disability

Materials may be borrowed in person, or by telephone or mail request. (See request coupon.) Orders are sent out free of charge via United Parcel Service for a three-week loan, including shipping time. Borrowers pay UPS return costs.

✓ **For more information, or for bibliographies on the above topics, contact Marni Schlesinger at 518-786-3211.**

Recommended Reading

The following books are available for free loan from the Resource Center:

Math EQUALS: Biographies of Women Mathematicians and Related Activities, by Teri Perl. Addison-Wesley, 1978.

Meeting at the Crossroads: Women's Psychology and Girls' Development, by Lyn Mikel Brown and Carol Gilligan. Harvard University Press, 1992. Research study of the reasons for the sharp change undergone by most girls during adolescence, as a new fear of risk and of disturbing the peace modifies their girlish courage and confidence.

Megatrends for Women, by Patricia Aburdene and John Naisbitt. Random House, 1992.

Outstanding Women in Mathematics and Science--Display, by National Women's History Project. 1991. (See back page for address.)

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Books on Tape Available for Loan

The following Equity Center publications are now available for loan or for purchase from the Resource Center in tape format:

Roles in Conflict: Women Preparing for Higher-Wage, Technical Careers, 1990. Highlights successful programs and strategies developed in New York State under VEA funding; examines historical and cultural influences on women career choices. **($10 per copy)**

In Transition...Opening Your Classroom to the Adult Student, 1990. Resource manual for new instructors of adult students. **($5 per copy; single copy free)**

Experienced Learners in the Classroom, 1992, is a manual for re-entry adult students, designed for use in conjunction with **In Transition. (Single copy free)**

Child Care Network Newsletter, beginning with the Fall, 1992, issue. **(Free)**

VOICE newsletter, as of February, 1993. **(Free)**

Other Books on Tape Available for LOAN

With the Power of Each Breath: A Disabled Women's Anthology, by Susan E. Browne, Debra Connors and Nanci Stern. Cleis Press, 1985. Selections by 54 women with a wide range of physical, emotional, and learning disabilities.

Education That Works: Creating Career Pathways for New York State Youth – Task Force Report, 1992.

Equity Center Child Care Publications

The **Child Care Network Newsletter** is published three times a year for the staff of ACCESS and other school-based child care programs. Most articles, however, are of general interest to child care staff. **✓ Please use the return coupon on page 7 to request a subscription to this newsletter..**

Helping Parents Choose Quality Child Care is a packet of workshop activities designed for use with a group of parent s of preschool children. Activities concentrate on child care for children from six weeks to five years. The facilitator/presenter should be an early childhood education professional. **✓ Single copies are available free from the Equity Center, attention: Cheryl Marcella.**

Manual for Adult Students

The **Equity Center** has recently produced **Experienced Learners in the Classroom** to help returning adult students successfully juggle the unique challenges facing them as adult learners. Designed to be used in conjunction with the **In Transition...Opening Your Classroom to the Adult Student** manual for teachers of adults, this material may be reproduced for distribution to adult students. The unbound format allows educators to select all or part of the material and add specific language or sections to personalize it with an agency's hours, days of operation, attendance policy, course offerings, etc. **✓ Single copies of this adult student packet may be obtained free from Equity Center by using the return coupon.**

✂ Clip and Return Coupon ✂

Please send me:

- ☐ **Sample materials - VANGUARD Student Award**
- ☐ **Manual for Teachers of Adult Students** (initial copy free; additional copies, $5 each)
- ☐ **Manual for Returning Adult Students** (initial copy free; additional copies, $5 each)
- ☐ **Updated Resource Center Media Catalog**
- ☐ Information on the **Disabilities Services Advisory Group**
- ☐ **Roles in Conflict: Women Preparing for Higher-Wage Technical Careers** (initial copy free; additional copies, $10)
- ☐ Bibliographies on **Women's History**

Please send me information about Equity Center Services in the area of:

- ☐ Serving women with disabilities
- ☐ Working with adult students
- ☐ Career exploration for re-entry women (**Career Challenge**)
- ☐ Career exploration for middle school girls (**Out of Bounds**)
- ☐ Other ____________________

☐ I would like to borrow materials from the Resource Center. (List topics, titles, dates on attached page.)

Newsletter Mailing List: ☐ Please add as follows ☐ Please correct as follows:

Name and Title ____________________

Organization ____________________

Address ____________________ Telephone ____________________

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role models
in the curriculum

Study of Women's History Identifies New Role Models for Students

Women's History Month in March is a good time to begin to identify discover some of the important women who have been invisible in the traditional curriculum. **(February, which is Black History Month, presents a similar opportunity.)**

A wealth of supplementary material is now available for student and teacher research, not only for history classes, but in all the content areas. These newly discovered historical role models can be an inspiration to female and African-American students to aim higher and work harder.

Locally, schools can coordinate special classroom, school-wide or community activities to raise awareness of the historical contributions of women of all cultures. Another approach is to arrange a time, perhaps as a summer project, for research and reassessment of how well curriculum reflects contributions of diverse groups, in all subject areas, at every grade level.

At the national level, the **National Women's History Project** serves as a clearinghouse for information, resources and teacher training programs on multicultural women's history and special **Women's History Month** activities. Project focus is on women in United States history, but they also offer materials on women in world history, math and science, women in literature and the arts and many adult-level resources. (See next column for mailing **NWHP** mailing address.)

Write for Women's History Catalogs

✓ **National Women's History Project**
7738 Bell Road
Windsor, California 95492
707-838-6000
FAX 707-838-0478

✓ **Organization for Equal Education of the Sexes**
P.O. Box 438
Blue Hill, Maine 04614
207-374-2489

Write for Free Black History Resources

✓ **Two curriculum guides,** one for commemoration of Rev. Martin Luther King, Jr., Day and one for Black History Month, are available free for K-12 teachers from:

New York State Education Department
Division of Intercultural Relations
Room 885 EBA
Albany, New York 12234
518-474-3934 Attention: Marie Deegan

Browse by Mail Among Our Resources on Historical Role Models

✓ Readers interested in borrowing resources on women role models from the **Equity Resource Center** can use the return coupon on page 7 to request bibliographies on the following topics:

- **Women at Work in World War II**
- **Women and the United States Constitution**
- **Women's History Resources**
- **Female Role Models**

Voice
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47 Cornell Road
Latham, New York 12110-1402
Telephone 518-786-3211 FAX 518-786-3245

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Inside:
- **Female Role Models in Math and Science**
- **Student Handout on Technical Skills**

Using Role Models to Encourage Nontraditional Participation

One of the main barriers to attracting more female students into nontraditional programs is the shortage of positive role models in these occupations. Many students are receptive to the notion that they can be anything they want, but in terms of real influence on academic and career decisions, role models speak louder than words. Sharing experiences with students to expand their academic and career options can help them realize the benefits of keeping those options open.

Who Can Serve As Positive Role Models

- Teachers
- Parents
- Community Members
- Older Students
- Recent Graduates

Tips for Using Effective Role Models

1. Present the role models in such a way that the student can identify with them. The most effective role model will connect with her/his audience as a "real person" working in a real job.
2. The role model should discuss not only what she does on the job, but the impact the job has on her private and family life, her interests and life goals.
3. Ongoing publicity is essential to provide recognition of women working in nontraditional careers and to encourage younger women to enter these male-intensive fields.
4. Sometimes the most effective role models are older students who are enrolled in nontraditional programs. If you have female students in the program, ask them to help with recruiting, speaking and mentoring.

Make Sure Students Ask Role Models the Following:

- Describe a typical day on the job.
- What is the salary range for work such as yours?
- How do you use math, science and computer skills in your job?
- What is it like to be a woman (or man) in this job?
- How did you decide on this particular career?

Sources: Vocational Options in Creating Equality. Albany-Schoharie-Schenectady BOCES. Volume XIV, No. 1. March 1993. Michigan Center for Career and Technical Education, Michigan State University

Mentor's Guide to Improved Equity in Decision Making

If you haven't done so already, start an equity resource library.

Career, Education, & Training Associates, Inc. has published a series of materials aimed at eliminating gender bias and stereotyping in vocational and applied technology education. The booklet format and the clear, targeted information provided makes this series a valuable resource. An outline of the ten publications available, as well as ordering information, is found in the Resource section of the guidebook.

The Mentor's Guide to Improved Equity in Decision Making: Roles, Methods and Influences contains the following sections:

I. **A Case for Mentoring**
Rationale for mentoring is provided.

II. **Mentoring: An Effective Approach**
This section lists issues that students need help dealing with.

III. **How to Establish a School Mentoring Program**
Suggestions for beginning a program are offered with sample projects.

IV. **Tools for the Program Operator**
The "tools" provided are sample letters for recruiting mentors, suggested activities for mentors, a mentor code of conduct, an application form, and a profile sheet to help match mentors with students. In addition there are sample forms and letters for students and their parents: profiles, guidelines, contracts, and permission forms.

These easy-to-use materials, published in 1993, are a good addition to the practitioner's equity resource library.

Sample Role Model Programs

This is a list of exemplary role model programs located in New York State.

1. Women in Science, Engineering and Math Mentors Program (pp. 40-42)
   (Rochester Institute of Technology)
   - Female Science Professionals Are Role Models For Students

2. Recipe for Success (p. 43)
   (Rensselaer-Columbia-Greene BOCES)

3. LEAP Career Expo (pp. 44-46)
   (Southern Westchester BOCES)

4. Talent Bank (pp. 47-50)
   (Finger Lakes Tech Prep Consortium)

5. Role Model Equity Mini Grants (pp. 51-83)
   (Greater Capital District Tech Prep Consortium)
   - Tech Prep Nontraditional Role Model Initiative
   - How to be a Role Model
   - A Strategy to Promote Gender Equity in Tech-Prep Programs
   - Helpful Hints for Role Models
   - Sample Letters and Information Sheets
   - Sample Role Model Day Scheduling Sheets
   - Sample Evaluation Sheets

RIT

Women in Science, Engineering, and Math Mentors Program (WSEMM)

A Rochester Institute of Technology (RIT), Rochester Area Interactive Telecommunications Network (RAITN), and the Professional Science and Technology Community Partnership

The goal of this project is to introduce high school girls to professional women from both educational and industrial scientific fields. By allowing the girls to interact with these role models, we hope to capture their interest in the science, math and technology fields and encourage them to pursue these areas of study.

The program began with the girls coming to RIT's campus for a careers assessment seminar. Then they carried on "e-pal" relationships via electronic conferencing on the data network to pursue many mentors and a myriad of different career avenues. The questions ranged from simple information requests regarding the requirements for a job to indepth pursuit of emotional and personal characteristics needed for different professions.

The luncheon finale brought us together on RIT's campus to get to know each other face to face. We then toured the Micro-electronics lab and manufacturing facility at RIT.

A 1993-94 school year program involved over 140 mentors and students. The 1994-95 program begins November 22nd with our opening activities and computer training. We hope to engage young women from informal education community organizations and RIT college freshman, as well as the over 150 high school girls and professional women in the area.

Professions Represented

Engineers (Environmental, Electrical, Mechanical, Process, Chemical, Service, Sales, Switch, Software, Industrial)
Veterinarian
Hydrogeologist
Private Consultant--Technical Writer
University Professors
Astronomer
Chemist
Computer Systems Manager
Microbiologist
Nuclear Medicine
Biological Diagnostics
Neurobiologist
Physician's Assistant
Surveyor's Assistant
High School Science Teacher
Infection Control Nurse
Emergency Room Nurse
Health Program Administrator
Biological Geneticist
Physicist
Pharmacologist
Professors of Math, Chemistry, Allied Health, Physics

For more information contact:
Carol T. O'Leary, RIT Institute Liaison for K-12 Programs
Phone: 716-475-2984 Fax: 716-475-2984
email: ctoetc@rit.edu

Rochester Institute of Technology ■ 91 Lomb Memorial Drive ■ Rochester, NY 14623-5603

Female Science Professionals Are Role Models for Students

Mentoring programs give information and encouragement about science careers to young women.

"Do you have to be a nerd to be a good scientist?"

"Is it OK to cry when your patient dies?"

"Do employers and colleagues not take you seriously because you're a woman?"

"What are the best courses for me to take?"

The above are real questions asked by real female high school students considering careers in science, engineering and math; the fields in which women are so scarce. Only 12 percent of U.S. scientists and engineers are women.

Those questions, and scores of others, are answered on a daily basis by successful women in the community who work in a variety of scientific professions, among them: physicians, electrical engineers, physicists and geneticists.

The students and the professionals are part of a new mentoring program coordinated through Rochester Institute of Technology's college of science.

Only 12 percent of U.S. scientists and engineers are women.

"The most important thing in mentoring is role modeling. Our program gives young women an image, into which they can grow, that all science and math isn't made up of white, middle-aged males," says Carol O'Leary who works on partnership programs at RIT.

The mentoring program, giving information and encouragement about science careers, is itself high-tech.

Students and mentors communicate through RIT's high-speed computer networks. All it takes to participate is a computer, modem, the proper software and necessary training.

The mentoring program also includes face-to-face lunch meetings and worksite visits. In March, students and mentors will meet and pair up for "shadowing," in which the girls will spend a day at work with the scientists.

"The most important thing in mentoring is role modeling," said Carol O'Leary, who works on partnership programs at RIT's technology center and also represents the New York State Education and Research Network. "Our program gives young women an image, into which they can grow, that all science and math isn't made up of white, middle-aged males."

Judy Ausmus, a hydrogeologist in the corporate

"Girls need mentoring because, despite the progress we've made, there are a lot of brilliant women out there who don't have the opportunities they should," says scientist Judy Ausmus.

environment division of Eastman Kodak in Rochester, had a different experience, and that's why she's one of the mentors.

"My father worked for an oil company and was a rock collector — and that got me started," said Ausmus, who has bachelor's and master's degrees in geology. "Then, when I got to college, my roommate was a geology major. She was my mentor. She told me what courses to take, gave me background on teachers — and also had copies of old tests."

From the experience of having a hands-on mentor, Ausmus says she knows "the importance of having someone to bounce ideas off, someone who can answer your questions."

The mentoring network she is part of takes only 15 to 20 minutes of her time each day, but Ausmus is sure it will make a difference.

"Girls need mentoring because, despite the progress we've made, there are a lot of brilliant women out there who don't have the opportunities they should," the scientist said.

By Carol Kleiman who is a business writer for the Chicago Tribune.

Source: Saint Paul Pioneer Press, February 1994

RECIPE FOR SUCCESS

Creative Concoctions to Help Kids Learn About Careers

Contributed by: Ted Hennessy
Career Development Specialist, RCG BOCES

Ingredients:

(1) Female Carpenter (Construction worker, electrician...)
(1) Male Nurse (Cosmetologist, secretary...)
(1) Class of outspoken and possibly biased middle schoolers
(2) Large pieces of paper
(1) Magic marker
(1) Brave student to record responses in front of the class (spelling doesn't count here)
(1 1/2) Periods of class time

Day 1:

This activity is a fun way to enlighten kids about how their stereotypes relate to the way they choose a career.

Arrange for two professionals who are working in careers that are non-traditional for their gender to present in your class. The day before your guest speakers arrive, make a general announcement that two workers will be visiting, naming only their professions. BE CAREFUL NOT TO REVEAL THEIR GENDER. Ask the class to describe the professions in a brainstorming fashion while a student records responses on the large sheets of paper. (Chalk boards tend to get erased by mistake.) Be sure to record responses that reflect gender bias and/or physical traits. (Ex: Nurses are - pretty, like to care for people, wear white dresses and stockings, wear their hair up, etc. Carpenters are - dirty, wear overalls, like to fix things, have mustaches and beards, etc.) Save the responses for the day the guest speakers arrive.

Day 2:

After your class has been seated, introduce your guest speakers, who have been out of sight until now. Now it's time to pull out the large sheets of recorded responses and go over with each guest just exactly how the class described them. It is at this point that you will realize that you should have warned your guest speakers of what to expect!

After some initial embarrassment among students, the impact of stereotyping becomes readily apparent. Teachers can ask, "Why did our lists look like this?" Discuss the tendency to make assumptions and set expectations based on media images, personal observations and misconceptions. Students can learn that your guests chose their careers because they enjoy their work, are good at it, and find satisfaction in their jobs. They can also learn that females in non-traditional careers tend to make higher wages than those choosing traditional careers and, therefore, it is a good idea to be aware of a variety of career options. Be sure to save time for question and answer sessions with the speakers!

Here are some sample questions:

1. What is it like to be a woman/man working in your field?
2. What is the hardest thing about working in your field?
3. What do you like best/least about your job?
4. What made you decide to pick this career?
5. What kind of training do you need?
6. Where did you get your training?
7. How many other men/women do you work with?
8. What advice do you have for students interested in your field?
9. Do you think that you are treated differently because of your gender?
10. What barriers should one be aware of if planning on entering your occupation?

Source: Questar III Development Center, 1943 Brookview Road, Castleton, NY 12033

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Careers On Exhibit

Air Conditioning/Heating/Refrigeration
Accounting
Actuary
Arborist
Architecture
Attorney
Auto Body
Auto Mechanics
Banking
Cable T.V.
Carpentry
Chemistry
Child Care
Civil Engineering
Certified Nurse Assistant
Commercial Art
Communications
Computer Repair
Construction Management
Cosmetology
Court Reporting
Culinary
Data Processing
Dentistry
Drafting
Early Childhood Education
Electrical Engineering
Entrepreneurship
Environmental Engineering
Fashion Design
Federal Bureau of Investigation
Financial Planning
Floral Design
Horticulture
Hospitality
Hospital Administration
Insurance
Kitchen Design
Landscaping
Library Science
Manicuring/Nail Technology
Marine Biology
Marketing Information Management
Mathematics
Medical Transcription
Military Services
Multimedia
Nail Technology
Newspapers
Nursing/LPN
Paralegal
Pharmacy
Radio
Radiology
Security & Law Enforcement
Systems Analyst
Trade Electricity
Travel & Tourism
Tumor Biology
TV Production
Veterinarian

The LEAP Project is funded under the
Carl D. Perkins Vocational & Applied
Technology Act N.Y. State Equity Center
Project # 8020 95 0007

LEAP of Southern Westchester BOCES
Career Expo
65 Grasslands Road
Valhalla, NY 10595

Career Expo '96

for students 6th through 12th grade and their parents

Monday April 15, 1996
7:00 P.M. - 9:00 P.M.

LEAP is a project of the Westchester School/Business Partnerships, Southern Westchester BOCES

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LEAP Career Expo

LEAP (Linked Equity Approach Program)
of Southern Westchester BOCES

LEAP is a project of the Westchester School/Business Partnerships which offers schools in Westchester County a diverse series of events and services designed to encourage young people to consider careers nontraditional for their gender.

Overview: Students in grades 6 through 12 and their parents are cordially invited to attend a unique Career Expo which will introduce them to over 61 different careers. Career Exhibits, organized into cohesive *Career Clusters* are designed to be ***interactive***. Students and their parents will learn about wind tunnels, a multi-media computer system, marine biology, science, computer aided design, electronics, robotics, mathematics and much, much more!!!

Each of the exhibits will include the following components:

- ☆ **Working Professionals-** Nontraditional for their career, based on gender. Meet a Narcotics Detective, a Nurse, an Engineer, a Pediatric Dentist, an Architect, and many more.
- ☆ **College Representatives -** Meet representatives from Pace University's Lubin School of Business, Manhattan College, Wentworth College, Westchester Community College and many others.
- ☆ **Occupational Education Instructors** Teachers of Culinary, T.V. Production, Carpentry, Security & Law Enforcement, Fashion Design are among the many who will be there.
- ☆ **Students-** Meet students who have begun their professional education, in an Occupational Education program and can share their experiences and training for their chosen field with the guests.

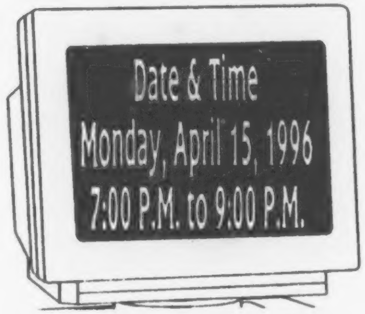
Special Features and Activities

- ☆ **Career Assessment Center:** During the Expo, Guidance Counselors and Career Development Professionals will be available to administer a computerized, gender-neutral career interest survey to students. Personalized reports will be printed, based on their career interests, which will help them navigate through the Expo.
- ☆ **Career Planning Workshop for Students & Parents:** Students and parents can learn about career planning: how to relate who you are to who you might want to become.
- ☆ **Résumé Workshop helps you: SUPER-CHARGE YOUR CAREER - With a *winning* résumé** Westchester's *only* Certified Professional Résumé Writer will show you how to:
  - ☆ Develop a presentation that tells who you are and what you can do.
  - ☆ Transition to your next career step.
  - ☆ Get a BETTER job /earn more money while in college.
  - ☆ Market yourself to consistently out perform your competition.
- ☆ **Expo Bingo:** Students who play Expo Bingo and visit a variety of exhibits and workshops will qualify for a door prize upon completing a row on their card. Exhibitors and Workshop Presenters will initial boxes on the card for the students.
- ☆ **Department of Labor Jobs Plus Data Bank:** Students can visit this interactive computer station and learn about careers/training available throughout the Country.

General Information

Location

The **Westchester Ballroom** at
The Rye Town Hilton
Westchester Avenue
Rye Brook, New York 10573



Date & Time
Monday, April 15, 1996
7:00 P.M. to 9:00 P.M.

For More Information

Noël Appel
Coordinator of LEAP
Westchester School/Business Partnerships
65 Grasslands Road
Valhalla, New York 10595
(914) 761-3400 Ext. 309

Sponsored By:

The Rye Town Hilton

Directions to the Rye Town Hilton

I-287 WEST to Exit 10 (Westchester Avenue, Route 120 A). Go to the **3rd traffic light** and turn LEFT into the Hilton's driveway.

I-287 EAST to Exit 10 (Westchester Avenue, Route 120 A). Go to the **4th traffic light** and turn LEFT into the Hilton's driveway.

"YES I CAN!"
LEAP
LEAP (LINKED EQUITY APPROACH PROGRAM) OF SOUTHERN WESTCHESTER BOCES

Play LEAP CAREER EXPO BINGO!!

Be sure to play!

H	I	L	T	O	N
1	7	13	19	25	31
2	8	14	20	26	32
3	9	15	21	27	33
4	10	16	22	28	34
5	11	17	23	29	35
6	12	18	24	30	36

WIN A PRIZE!!

Instructions:
Each exhibit booth you visit will be coded with a BINGO number. The person at the booth will stamp your card on the appropriate number. Six numbers in a row, in any direction, will win you a prize!
Workshop attendance earns you a "free" stamp, which can be used in any space.

The Talent Bank

A project of the Tech Prep of the Finger Lakes involved developing a "Talent Bank" of nontraditional workers. A sample recruitment letter, press release, thank you letter and a page of the Equity Talent Bank Speakers Bureau booklet that was published as a result of the project are provided.

Dear BPW Members:

For the past three years Finger Lakes Community College has been awarded grant funding for a Tech Prep Project which has grown into a Consortium comprising 14 regional high schools, Wayne Finger Lakes BOCES, and the College. The educational program develops an applied perspective for a four-year sequence initially beginning in the junior year of high school and continuing through two years of post secondary education, with the result being either a certificate or associate degree. A Tech Prep student may directly enter the workplace as a technician or continue with further education or advanced degrees.

This year the College was awarded an additional grant for activities associated with gender equity issues. According to the 1990 Bureau of the Census for Rochester, men and women workers are still concentrated in traditional occupations i.e. women make up 95.8% of Registered Nurses and 92% of Bank Tellers; men make up 97% of Tool and Die Makers and 95% of Stationary Engineers. Clearly, there is a need to provide outreach activities designed to increase awareness of nontraditional training and employment and to eliminate sex bias and stereotyping in education and career choices.

It is our intent to provide young women with the opportunity to explore nontraditional careers and invite the Canandaigua BPW members to share their career experiences with these women. One activity we are pursuing is the creation of a "talent bank" which comprises biographies of volunteers willing to speak to students at local high schools. Time commitments are most likely minimal. A sample of a biography for a guideline is attached. Please contact me at (716) 394-3500 ext. 420 or by mail c/o FLCC, 4355 Lake Shore Drive, Canandaigua, NY 14424 if you would like to volunteer.

Thank you for your interest in this project.

Sincerely,

Rebecca Gamba
Project Specialist
Finger Lakes Tech Prep

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NEWS RELEASE

The Finger Lakes Tech Prep Consortium was granted a $20,000 two-year grant to initiate activities that focus on promoting Sex Equity in education for 1994-1996. Tech Prep will begin this initiative by increasing interest in nontraditional career opportunities through the development of a "Talent Bank." The Talent Bank will be a booklet which contains biographical information about individuals in nontraditional careers in the Finger Lakes Region. The Talent Bank will be sent out to schools within the consortium and placed in their guidance office for students to use in career exploration.

The Talent Bank will be developed as a resource list of professionals who are in a nontraditional career and have volunteered to be role models to consortium high school students interested in nontraditional careers. The role models will serve as workshop and classroom speakers for the Tech Prep Finger Lakes Consortium; peer counselors for future and current nontraditional Tech Prep students; and may be prospective employers. The role models are being recruited from business and industry, education, and the community. Anyone interested in becoming a role model may contact Rebecca Gamba at the Tech Prep project office:
(716) 394-3500, extension 420.

Sample Entries for the Talent Bank

Mr. Richard Steinhilper
9 Hillside Drive
Clifton Springs, NY 14432
Home # 315-462-9519 Work # 716-383-4480

Available as:	A guest speaker. Maximum group size - 50 students.
Schools willing to speak at:	Willing to travel to Bloomfield, Canandaigua, Manchester-Shortsville, Phelps-Clifton Springs, Geneva, Penn Yan, Marcus Whitman.
Can Speak about:	My career, educational, and avocational experiences.
Subject Matter:	Data processing applications in business. Aviation Oriented Careers.
Best Times:	Wednesday and Thursday afternoons are best. Other times by arrangement. I request 2 weeks notice.
Areas of Expertise:	MIS Applications and Word Processing Trends. Aviation.
Relevant Experience:	Burns Personnel, Inc. Operations Manager (1988 - present)
Special Attributes:	Private Pilot's License Rated in Single Engine LandGliders Single Engine Sea Gliders Advanced Ground Instructor MBA - Accounting Several years teaching accounting at FLCC Member - Penn Yan Flying Club.
Additional Comments:	Employer commitments may require scheduling changes on short notice.

Dr. Elizabeth S. Harvey

c/o Aberle Eye Care
215 South Main St.
Canandaigua, NY 14424
Work # 716-394-0696

Available as:	A guest speaker. I prefer speaking to groups of 25 & under of sincerely interested students.
Schools willing to speak at:	I am willing to travel to any of the schools listed.
Can Speak about:	My career & educational experiences.
Best Times:	Monday through Friday afternoons. I need at least 2 weeks notice prior to any presentation.
Areas of Expertise:	I can also speak about keeping educational options open for non-traditional female careers.
Relevant Experience:	Ithaca College (1982-1986) Major Biology, Minor Spanish Junior year abroad Spain Penn College of Optometry (1986 - 1991) Doctor of Optometry and Bachelors in Optics Aberle Eye Care (1994-present) Partner (with husband) in private practice.
Special Attributes:	Fluent in Spanish "Well-rounded" individual
Additional Comments:	I am due with my second child in early September and for the months of September & October will be unavailable . Please feel free to contact my office for scheduling thereafter.

Greater Capital District Tech Prep Consortium
Role Model Mini Grants

Counselors - On the following pages you will find materials, guidelines, and tips to use in role model activities. These are provided to you by the Greater Capital District Tech Prep Consortium.

The sex equity component of the Greater Capital District Tech Prep Consortium focuses on the use of individuals, working in technical occupations nontraditional to their gender, as role models to stimulate interest in such occupations among middle and/or secondary school students who are potential Tech Prep enrollees. This model consists of role model visits to schools with related instructional activities to precede and follow the visits.

A pilot role model project was held on May 18, 1993 for middle school students of the Fonda-Fultonville School District. This approach allowed for exposure of approximately 150 students to a variety of role models in sessions divided equally between presentations by the role models and interaction between students and role models. A meeting and dinner were held prior to the event to welcome the role models and prepare them for the presentation. An instructional module, for use in conjunction with the role model presentations, was developed for teachers in the form of an activity packet.

Each year since 1993 additional school districts have received funding to replicate or adapt this project to meet the needs of their school. Detailed instructions and steps to replicate this project are available for interested school districts. On the following pages you will find the steps for replication and the materials that participating schools receive, to assist them with the project, including guidelines and tips for role models, guidelines for teachers, sample student scheduling formats and student and role model feedback forms.

Tech Prep Nontraditional Role Model Initiative

Steps to Replicate the Tech Prep Role Model Initiative:

A. Designate the Site Project Coordinator - suitable possibilities include Principal, Guidance Counselor, Home & Careers or Technology Education teacher.

Responsibilities of the Site Project Coordinator include:

1. Review materials in this packet on the Role Model Initiative.
2. Prepare and interest other teachers and school personnel in the role model rationale, particularly as related to the Tech Prep philosophy. (Information attached.)
3. Build a planning team at school to include administrator, guidance counselor, home & career teacher, technology education, and other interested teachers/staff.
4. Inform PTA/PTO and ask for possible role model volunteers from that organization.
5. Correspond with Greater Capital District Tech Prep Consortium staff for the purpose of technical assistance and reporting.
6. Prepare, distribute and collect materials, i.e. role model confirmation forms and equipment needs, student choice sheets, and evaluations. (Samples in the Appendix.)
7. Communicate information about the day's events and schedule key personnel and other school offices.
8. Coordinate and lead the briefing pre-session for role models.
9. Lead "Wrap Up" session after the Role Model Program discussing the following:
   a. Reaction of the students
   b. Suggestions for improvement from role models and staff
   c. Any concerns regarding logistics
   d. Satisfaction with student groupings
   e. Overall success of the day
10. Submit a summary of the project results and "Wrap Up" session to the Project Director.
11. Maintain role model information and submit the final list to the Greater Capital District Tech Prep Consortium.
12. Send thank you notes to the role models from the school and/or the Tech Prep Consortium.

B. Site Coordinator along with School Planning Team

GENERAL LOGISTICS

1. Choose the date and clear it with appropriate school personnel, i.e., Principal.
2. Identify student population to participate (grade and number).
3. Determine the number of role models required. (One role model per group of 10-15 students works well.)
4. Identify appropriate role models to correspond with Tech Prep programs.
5. Determine length and number of sessions.
6. Revise school's daily schedule to fit the day's program. Include comfort breaks for role models.
7. Contact each role model personally for commitment to participate.
8. Send Confirmation Form to role models. The Site Coordinator will be responsible for maintaining them and checking that each role model has returned the form.
9. Provide directions to campus and a map of the school building.
10. Decide if you will hold a pre-session of training and information for the role models. If so, determine when and where it will be held. Work closely with the Consortium staff to develop an agenda. (See Appendix for training materials.)
11. Assign student guides to greet and direct role models and guests.
12. Choose high school students interested in similar careers to act as a facilitator in each group. If it is not feasible to have high school students participate, consider scheduling teachers to supervise each group.
13. Develop descriptive choice sheets for students to choose sessions they are interested in attending. (See Appendix.)
14. Determine the method of sorting and scheduling students - honoring student's choices vs. gender balanced or single gender groups.
15. Schedule appropriate rooms for each role model - assigning more than one role model per room, even in the cafeteria, gymnasium or library, is not recommended.
16. If space is an issue consider using the local community college, BOCES, or public library.
17. Arrange for video taping of the day's program.
18. Invite the Superintendent, School Board members, Equity Center staff, and the State Equity Coordinator (Mary Ann Etu).
19. Arrange for publicity.
20. Schedule a suitable room to hold the "Wrap Up" session.
21. Arrange for lunch for the role models, junior role models, participating teachers (when possible), guidance counselors, administrators, video technician and guests.
22. Determine whether it will be possible to provide an honorarium, mileage reimbursement or small gift to role models. Some token of appreciation is recommended regardless of the budget.

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Activities Related to Teachers/Students

1. Provide pre/post activity packets for teachers. (See Appendix.)
2. Subject teachers sign up for pre-activities to avoid duplication.
3. Stress Tech Prep connection during pre/post activities with students.
4. Brainstorm appropriate questions for the role models with the students. (See Appendix.)
5. Ask students/school personnel to write thank you notes to role models and their employers, and to appropriate school personnel.

Activities Related to Role Models

1. Provide role models with information and training preferably at a session that incorporates an ice breaker/social activity. (See Appendix.)
2. Determine all role models' equipment and power source needs. (See Equipment Request form in Appendix.)
3. Determine if the school/project will reimburse expenses incurred for supplies and materials used by the role models.

Source: *Two Year College Development Center*
State University at Albany
135 Western Avenue, Husted 208
Albany, NY 12222
Phone (518)442-5590 Fax (518)442-3746

HOW TO BE A ROLE MODEL?

A Guide for Role Models

The use of role models is an excellent way to open doors to various occupations that students otherwise might not have known about.

The use of role models is an excellent way to open doors to various occupations that students otherwise might not have known about. Many young women and men never consider the career for which they are best suited simply because persons of their gender have not traditionally been involved in that occupation. The Greater Capital District Tech-Prep Consortium is providing opportunities for role models to share information with students about experiences, benefits, problems and barriers related to their work in nontraditional fields.

The purposes of the role model activities are:

a) to encourage students to keep options open to all career possibilities including nontraditional careers,
b) to encourage students to consider enrollment in a Tech Prep alternative.

The process is centered around site visitation(s) by several role models. Schools provide preliminary and follow-up activities around the role model visit (see Activity Packet). Each role model may give one or two presentations to various groups of students, who may form discussion groups. Teachers and students should prepare for the visit by discussing the need for technical careers and the opportunities for females and males in nontraditional occupations by developing questions for the role models and by researching the lives of significant women and men who have worked in nontraditional fields.

Preliminary Activities Recommended to Teachers are:

1. Define and describe "nontraditional occupations"
2. Introduce the Tech Prep Program(s)
3. (a) Discuss benefits involved in pursuing a nontraditional career

There should be time set aside for students to ask the role models questions about their career and how it affects their personal life.

(b) Identify reasons students might wish to consider enrolling in Tech Prep career courses (e.g., better paying jobs with advancement potential, jobs suited to individual interests and aptitudes, opportunities to overcome gender discrimination, etc.)

4. A discussion of barriers such as self-exclusion and workplace discrimination and identification of resources available, such as counseling and guidance.

About the Role Model's Presentation:

The teacher/administrator should introduce the role model by name, occupation, business or industry in which employed, educational background and length of time in occupation. The role model should speak briefly and be open for questions. The role model should also expect student interest in his/her personal life, e.g., questions regarding marriage, children, family support, etc. Role models should speak informally to students and dress comfortably (casual dress or business clothing).

Here are some questions role models can expect:

This list of questions can help the role model prepare for their presentation — they will have a better idea of what to expect.

- What are your daily duties?
- Describe a typical workday.
- Do people treat you differently because you are a woman (or man)? Do you work by yourself or with other people?
- Are there any special physical requirements for your work?
- Is your job dangerous?
- Do you have to wear a special uniform?
- Is it easy to be a woman in this job?
- How many of your co-workers are women?
- Are chances of raises and promotions as good for a woman as for a man?
- What do you like most, or least, in your job?
- Why did you decide to enter this line of work?
- What education or training did you need for this job?
- Do you work a lot with numbers and math?
- Were you good at math? How much did you take in high school?

Questions For Role Models

- If college is required, how many years? What kind of degree?
- What is the salary range?
- How did you select your career?
- Would you choose the same career if you had it to do over again?
- What are three high school courses that might help me in this career?
- What are the opportunities for advancement?
- Do you get a chance to travel? Do you HAVE to travel?
- What effect does your job have on your family? Your lifestyle?
- Are there child care resources/needs associated with your job?

Provided by the Greater Capital District Tech-Prep Consortium, Gender Equity Project, 1994.

A Strategy to Promote Gender Equity in Tech-Prep Programs: Teacher Guidelines

Many young women and men never consider the career for which they are best suited simply because persons of their gender have not traditionally been involved in that occupation. The Greater Capital District Tech-Prep Consortium is providing opportunities for role models to share information with students about experiences, benefits, problems and barriers related to their work in nontraditional fields. The purposes of the role model strategy are:

a) to encourage students to keep options open to all career possibilities including nontraditional careers,
b) to encourage students to consider enrollment in a Tech Prep alternative.

How To Use Role Models

Prepare for role models' visits by discussing with students the need for opportunities for females and males in nontraditional occupations.

The process is centered around site visitation(s) by several role models. Schools provide preliminary and follow-up activities around the role model visit (see Activity Packet). Each role model may give one or two presentations to various groups of students, who may form discussion groups. Teachers and students should prepare for the visit by discussing the need for technical careers and the opportunities for females and males in nontraditional occupations by developing questions for the role models and by researching the lives of significant women and men who have worked in nontraditional fields. The day should be chaired by a school administrator, teacher or counselor who is familiar with the students participating.

Preliminary Classroom Activities

1. Define and describe "nontraditional occupations"
2. Introduce the Tech Prep Program(s)

Share with students the benefits of working in a nontraditional career — let them know of opportunities to overcome gender discrimination.

3. (a) Discuss benefits involved in pursuing a nontraditional career

(b) Identify reasons students might wish to consider enrolling in Tech Prep career courses (e.g., better paying jobs with advancement potential, jobs suited to individual interests and aptitudes, opportunities to overcome gender discrimination, etc.)

4. A discussion of barriers such as self-exclusion and workplace discrimination and identification of resources available, such as counseling and guidance.

NOTE: The New York State Occupational Education Equity Center can help you locate resources to assist you plan preliminary activities. Also, consult Activity Packet.

The Role Model's Presentation

The teacher/administrator should introduce the role model by name, occupation, business or industry in which employed, educational background and length of time in occupation. The role model will have been trained by Consortium staff to speak briefly and to be open for questions. They will be encouraged to give personal details about their lives. Are they married? Do they have children? How supportive is their spouse? How do they arrange for child care? What sacrifices do they make? Role models are also encouraged to make their presentations as informal as possible, and to be sensitive to their appearance (e.g., industrial work clothes may be a disincentive to young women).

Questions Role Models Can Expect

- What are your daily duties?
- Describe a typical workday.
- Do people treat you differently because you are a woman (or man)?
- Do you work by yourself or with other people?
- Are there any special physical requirements for your work?
- Is your job dangerous?

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- Do you have to wear a special uniform?
- Is it easy to be a woman in this job?
- How many of your co-workers are women?
- Are chances of raises and promotions as good for a woman as for a man?
- What do you like most, or least, in your job?
- Why did you decide to enter this line of work?
- What education or training did you need for this job?
- Do you work a lot with numbers and math?
- Were you good at math? How much did you take in school?
- If college is required, how many years? What kind of degree?
- What is the salary range?
- How did you select your career?
- Would you choose the same career if you had it to do over again?
- What are three high school courses that might help me in this career?
- What are the opportunities for advancement?
- Do you get a chance to travel? Do you HAVE to travel?
- What effect does your job have on your family? Your lifestyle?
- Are there child care resources/needs associated with your job?

Follow-Up Activities

After role model presentations, discuss possible next steps with students — share their enthusiasm by providing career guidance and exploration.

This is the time for further discussion of supports and barriers associated with nontraditional career choices.

1. Obtain as much feedback as possible from your students. Take a survey of their career awareness, attitudes and interests. Discuss their feelings and concerns regarding the role-model presentations.
2. (a) Discuss pros and cons of nontraditional occupations, (b) Discuss what's available through Tech Prep and other educational/career options.
3. Discuss possible next steps (e.g., career guidance and counseling, academic preparation or remediation,

consulting and involving parents, follow-up contacts).

NOTE: A bibliography of resources to assist with preliminary and follow-up strategies is available in the Activity Packet.

Gender Equity Addendum Project Task Force:

Karen Brown
New York State Occupational Education Equity Center

Alan Bryce
SUNY College of Agriculture and Technology, Cobleskill

Elaine Mongin
Hamilton-Fulton-Montgomery BOCES

Angela Prestigiacomo
Schenectady County Community College

Project Staff:

Laverna M. Fadale, Project Director
Richard King, Project Associate

Two-Year College Development Center
University at Albany
State University of New York

Provided by the Greater Capital District Tech-Prep Consortium, Gender Equity Project, 1994.

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Helpful Hints for Role Models

TIPS FOR A SUCCESSFUL CAREER DISCUSSION OR WORKSHOP

As you develop your presentation for your Expanding Your Horizons conference, here are some things to consider:

What is equity? One purpose of Expanding Your Horizons in Science and Mathematics conferences is to promote educational opportunities, and, thus, career opportunities for girls. Many barriers still remain (gender stereotyping, teacher and parent expectations, peer pressure, media, etc.) that limit the participation of girls in science and mathematics. Expanding Your Horizons conferences are designed to help break down these barriers by presenting girls with encouragement, role models, and hands-on experiences to spark the interest and commitment necessary to prepare for careers that require prerequisite mathematics and science courses. We want to motivate girls to take all the mathematics and science courses that they can.

You are expected to help us with this task. Please be as encouraging as possible to the girls who attend your workshop session. Try to spark their curiosity about careers, mathematics, and science by being enthusiastic, challenging and interesting.

If boys also attend your workshop, monitor yourself so you are not teaching to the boys. If you use students for a demonstration, use girls. Watch who you call on during discussions to make sure that girls participate in workshop interactions.

Introducing Workshop Activities: At the beginning of your session, review the upcoming activities. For example, you might say that you intend to tell them a little about yourself, have them introduce themselves, and then you will answer questions they might have about you or your career. At 10:30, the girls will begin using the microscopes to view slides of plankton in pairs while filling in some observations on a worksheet. After 15 minutes, you will describe the importance of plankton in the food group. You will end the session by sharing with the group what you have observed. As an alternative, you might choose to write your session agenda on the chalkboard.

Icebreakers: Try to divide the time for your workshop into a variety of activities, including listening, talking, experimenting, acting, etc. Be friendly and personal. You might want to open your session with some information about yourself and you might want to have the girls introduce themselves. You can have them tell their names, grades, schools and favorite subjects. Or you might try something more imaginative: (1) ask the girls to pull an object from their pocketbooks and in two sentences describe the object and why it is important to them. The comments will reveal something about themselves, their interests, or their families and will help them to get a sense of each other. They may be shy at first, but there will usually be one or two girls who will be extrovertive and get the ball rolling. You can demonstrate with your own example. (2) Or you could ask them to take a few minutes to think about what they might like to be when they grow up. Encourage them to imagine what they will be doing in five or ten years. Tell them they are not to think about whether they will be able to do it, or how hard it might be to achieve. Ask them to tap into their wildest dreams. And then, perhaps they can share what they've thought about or made a few notes about. (3) You could ask the girls to make a timeline of their lives indicating the high and the low points. After they have had some minutes to do this -- a graph might be appropriate -- they might then determine if they have learned anything about themselves and their interests. They could share their insights.

If you open yourself up to questions from the floor -- and we encourage you to do this -- be prepared to answer questions such as the following. These are typical questions that workshop leaders have been asked:

1. How much money do you earn?

2. Are you married? (What they really want to know is -- do you have a personal life, what's it like, and how do you balance it all)

3. How many years of school do I really need to be a _______?

4. Did you always know what you wanted to be? (Many young women at this age are uncertain about their futures. Help them see that our changing world may require flexibility and frequent career changes in the future.)

5. Do you ever make mistakes? What do you do when you make a mistake?

6. If you started over today, what would you do differently? or the same?

7. Do you like what you do?

When answering, you might imagine that you are talking one-on-one with a young woman whom you know, e.g., your niece, daughter, next-door neighbor.

Learn by Doing: Then have the girls DO SOMETHING. Organize an activity that relates to your expertise. With youngsters, they will have questions and they will not perform the activity as rapidly as you might expect, so give them more time than you think they might need. It's important to get out of the way and let them fumble a little for themselves. Give them the opportunity to accomplish something on their own.

Discussion Techniques: You may have been asked to participate in a career discussion instead of a hands-on workshop. Be careful - you are trying to spark their interest - not lecture or educate. Tips for successful discussions include:

1. Ask open ended questions, not yes/no questions.

2. Phrase each question clearly and make sure the girls understand what it is that you want to know. Sometimes they may not understand terminology, which prevents them from discussing an issue.

3. Define terms that may be new to the girls. This promotes understanding of what you are talking about, and helps develop vocabulary.

4. After you ask a question, WAIT for an answer. This is called "wait time." Although silence is uncomfortable to most people, "wait time" allows girls to formulate answers to questions.

5. Some discussions are conducive to small groups. If your workshop group is over 12, break them into small groups of 3-4 girls. Each small group can discuss a different question, or the same one. Ask groups to take notes and report back to the large group at the end of the discussion.

Guided Activities: Some activities and discussions benefit from having a guide sheet that takes girls through the process. A good example of a guide sheet makes goals clear and includes questions or steps to follow to reach the goals. Make guide sheets as interesting as possible.

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SAMPLE HANDS-ON WORKSHOP
for 60-minute workshop

We know that preparing a hands-on workshop for girls who attend EYH conferences can be a difficult task. It is made more difficult by not knowing what a "hands-on" activity really is, and not having experience teaching young women. This description of a sample hands-on workshop is designed to assist you with your preparation.

Workshop title: Something Fishy
Career: Marine Biology

Supplies: marking pens; 11" x 17" yellow and grey colored paper; masking tape; plastic probes; 1 whole fish per 2 people; worksheets; career information sheets and follow-up activity.

Time:	
2 minutes	I. **Introduction:** "Hello, my name is Susan Starfish, and I am a Marine Biologist. I am here today to show you some things I do as part of my job."
5 minutes	II. **Defining career:** "First, I would like you to talk with the person sitting next to you about two things. Number one is a definition of a marine biologist that you both agree with. Please write your definition on the grey sheet of colored paper. Number two is to list three things you think a marine biologist does. Write these three things on the yellow sheet of paper. We will have five minutes for this discussion."
5 minutes	III. **Collecting info:** "I would like your attention now, please. Would one of you please bring your definition to this wall and tape it up with masking tape. The other person, please take your list of three tasks to that wall, and tape them up."
5 minutes	IV. **Using info:** "Let's look at these definitions of a marine biologist. I see many of you have a pretty clear definition of what the term "marine biologist" means. It is, in fact, someone who studies plants and animals from the sea. Now let's look at the things you think a marine biologist does. This is a pretty good list. I do some of these things, like (points to examples from lists). I also (continues list of things that she does on her job.)

25 minutes **V. Hands-on activity:** "Now that you know some of the things I do as a marine biologist, let's do something that is part of my work.

In front of each pair of you is a whole fish in a tray, a plastic probe and a worksheet. The worksheets contain questions like how many fins are on the fish? Where are the eyes located? Where is the mouth located? What kind of teeth are in the mouth? Each group has a different kind of fish, and all of these fish can be found at the local fish markets.

This is what you will do for the next 25 minutes. Please look at the worksheets. These worksheets are to be used to record information about your fish, and using the observations about your fish, to describe the habitat of your fish ... the place where it lives. At the end of the 25 minutes, we will discuss your observations and conclusions.

Let's answer one question on the worksheet together. How many fins are on your fish? (Many girls call out an answer.) O.K. Write down this number in the appropriate space on the worksheet.

Are there any questions? (Waits at least 30 seconds.) If not, then let's go to work."

(During the time that the girls are working with the fish, Susan Starfish walks around the room interacting with the girls about their observations, etc. She answers questions, clarifies information, and helps girls draw conclusions from observations.)

17 minutes **VI. Closing:** "Please stop working with your fish now. I would like to hear from the groups about the observations and conclusions you developed about the habitat of each fish. Would one group like to go first? (Waits 30 seconds, no volunteer.) O.K., then I would like this group to give us their observations about their fish."

(Two girls report observations.) "Now what was your description of your fish's habitat?" (Girls answer.) "Thank you. Now let's hear from this group."

(All groups finish reporting observations and habitat description.)

"I have enjoyed sharing some things about my job as a marine biologist with you today. As you leave the room, please pick up a hand-out that is on the back table. This includes more information about what marine biologists do, and some additional activities about body structure and functions that can be done with fish from the fish market. Thank you for your time."

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Hints:

1. Be human.
2. Provide some information about your career beyond the hands-on activity.
3. Use active learning - small groups or pairs, that actually do something.
4. Keep students active - don't lecture or demonstrate. Let students do the activity.
5. Keep students engaged. Sometimes when attention is distracted, it may be because students are stuck or don't understand what they are supposed to be doing. Move among the groups, listening and give them hints if they need them.
6. Be prepared for extra activities in case your group is small, or the first hands-on activity is completed quickly.
7. More around the room. Interact with as many students as possible.
8. Make sure the learning environment is as comfortable as possible. Move furniture around if you need or want to.

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What Are Middle School Students About?

A list of characteristics for students in Middle School is at the bottom of the page. Take some time to read through these characteristics of students in grades six, seven and eight.

Generally speaking students:

LIKE to be included and do things.
Involve the group in an activity. For example, a nurse might teach the class to check each other's pulse or an emergency medical technician might involve students in doing a proper body lift.

LIKE picture, graphics and handouts.
Bring visual aides pertaining to your job.
Wear clothes you wear in your work.
Bring some of the tools you use or things you make at work (especially items that can be passed around and touched).
Bring films, slides, posters, or handouts that tell about your work.

Are BORED with statistics.

LOVE stories. Share your personal experiences with them

NEED varied activities.

NEED simple, honest answers. They also need to know that people of any ethnic background and gender can be successful in the occupation.

WANT to ask questions... BUT sometimes are very shy about speaking up! You may want to warm them up by asking them questions (especially questions that require more than a yes or no response).

Characteristics of Middle School Students (Ages 11 to 14)

Attention span: 30 - 35 minutes unless activities are varied

Vocabulary: understand most technical terms

May gripe a bit, but will work well anyway

Are outgoing and enthusiastic towards most things; interested in trying new things

Are independent, practical, and detailed in their thinking

Have some difficulty settling down and getting started

Are better listeners than they look

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What to Say About Your Occupation

WHO do you work for?

WHAT do you do?
- What is your job title?
- What are your duties?
- Do your duties or tasks change from day to day?
- What are the physical and mental requirements?
- Are there unusual demands?
- Is your job dangerous?
- What skills and personal qualities are important in doing your job
- What type of interactions do you have with other people?

WHEN do you work?
- What are your working hours? Are they the same every day?
- Are your hours flexible?
- Do you work weekends, holidays, or nights?
- Do you work overtime?

WHERE do you work?
- Do you work indoors or outdoors?
- Do you work in one location or different locations?
- Do you travel?
- Could you do your job anywhere in the country or state?

WHY do you work where you do?
- What aspects of your occupation do you like and dislike?
- What is the average salary for this occupation?
- Why did you choose this field?
- Are there opportunities for advancement?
- Is there a memorable experience in your work that was especially humorous, dangerous, or rewarding that you can share with students?

HOW did you get the job?
- What work experience is required?
- What education is necessary?
- What special licenses, examination, or certificates are required?

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WHAT ARE ADOLESCENT GIRLS REALLY THINKING ABOUT?

To help you prepare your presentation, we want to remind you what it was like to be a teen-age girl and to refresh your memory about her world. Some of our information comes from Girls Incorporated and a recent study from the AAUW concerning the self-esteem of young women.

The audience attending your workshop will be primarily girls, ages 12-17. A member of the Planning Committee can give you more specific information about your expected audience.

At this age girls are beginning to:

--form their own identities

--learn about romantic intimacy

--strive toward self-reliance

--develop a value system.

Girls vary a great deal at this stage. Behavioral and thinking patterns, rather than age, indicate the developmental stage at which any particular girl is functioning. According to Piaget, adolescence is a time of transition from concrete to formal operation. "The capacity to think conceptually and hypothetically develops slowly over the next six or seven years and remains a potentiality attained only partially by most and fully by some." (Lidz, 1976) Therefore, some girls will demonstrate advanced capabilities, while others will need more time to develop cognitively.

The early adolescent is egocentric; she focuses on self. Early adolescents tend to think that they are special or different--that no one understands how they feel (personal fable); and that nothing bad can happen to them (magical thinking). They also believe that everyone else is watching them at all times and passing judgement on their appearance and behavior (imaginary audience).

The early adolescent...seeks the company of adults other than parents who can serve as role models and provide support and guidance....

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Questions for the Role Models

1. What made you choose this line of work?
2. What subjects in school should you try to do particularly well in if you are interested in this type of work?
3. What kind of education after high school is necessary to do for your profession?
4. What kind of work experiences might help you when you go to apply for the job you have?
5. What personal characteristics do you need to do this kind of work?
6. What do like about your job?
7. What responsibilities or tasks in your work do you find least desirable?
8. Can you describe what your typical working day is like?
9. What are the working conditions at your job site with regard to such issues as (1) hours/day and week (2) fringe benefits (3) job security?
10. Is there a high demand for your kind of work?
11. What range of salary can someone expect to start at in your job area?
12. What type of promotional opportunities are available to you?
13. Do you feel there is any gender discrimination in your line of work?
14. Is sexual harassment confronted/prevented at your work site?
15. Is there a dress code where your work?
16. Do people have job security in cases of maternity/paternity leaves?
17. Do you have to travel as part of your job?
18. What do your family or friends think about your work? Are there any conflicts at home because of work demands?
19. Are you required to work as a team or do you work alone?
20. Do you feel like an important part of the business?

Sample Letters and Information Sheets

March 14, 1994

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Dear 2~:

Thank you for agreeing to participate in our **Nontraditional Role Model Career Day** on 3~. The program is specifically designed to increase middle school students' awareness of "*Tech Prep*" and related career opportunities that may be considered nontraditional for their gender.

Tech Prep is an emerging national effort to help students prepare for skilled, well-paying careers in a wide range of occupational areas. The Capital District Tech Prep Consortium, coordinated by the Two Year College Development Center, is sponsoring similar Career Days at 4~.

Enclosed is a **Participant Confirmation Form,** and some general information on *Tech Prep* and on "Being a Role Model." As a role model for this program, you will be asked to informally discuss your career experiences with small groups of students (10-15). We also welcome your use of any "hands-on" demonstrations or activities that may help you illustrate your career responsibilities. **Please complete the confirmation form and let us know what your equipment/materials needs are.**

Finally, you will receive information about the details of the Career Day that you are scheduled to participate in at the ***Role Model Orientation & Appreciation Dinner*** on **Tuesday, April 5, from 5:30 p.m. to 8:00 p.m. at Schenectady County Community College**. The orientation is relaxed and simple, but the dinner and company is gourmet! At dinner, you'll have an opportunity to get to know the other (near thirty) role models participating in this program. Please contact the Two Year College Development Center by **Friday, April 1,** if you **cannot** attend. Directions to SCCC are enclosed. We will be meeting in the **Student Forum Room** on the first floor of **Elston Hall.**

Your willingness to be involved in this program is greatly appreciated. Please feel free to contact any one of us if you have questions, comments or concerns.

Sincerely,

Constance Spohn, Tech Prep Coordinator
Two Year College Development Center

Angela Prestigiacomo,

Elaine Mongin, Jennifer Gardella
Karen Brown

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PARTICIPANT CONFIRMATION FORM

NONTRADITIONAL ROLE MODEL CAREER DAY PROGRAM

CAPITAL DISTRICT TECH PREP CONSORTIUM

Name:____

Job Title:____

Brief Job Description:_________________________________

____

____

____

Work Address:	**Home Address:**
__________________	________________________
__________________	________________________
__________________	________________________
Work Phone #:_________	**Home Phone #:**______________
Work FAX #:__________	**Home FAX #:** ________________

I prefer to be contacted at __ home __ work __ either.

BIOGRAPHICAL INFORMATION
Attach current resume or please fill in:

Educational Background:

____

__________________ ___________________________________

__________________ ___________________________________

- OVER -

Professional Experience:

____

____

____

____

____

Other Background Information (you'd like to share):

____

____

____

____

PRESENTATION INFORMATION

Do you plan to use any materials and/or equipment? If yes, please specify:

____

____

____

(Please indicate if you will supply these materials and estimate their costs -- You Will Be Reimbursed.)

AUDIO-VISUAL
REQUEST FORM

Requested By ____________________

____ VCR/TV

____ Cassette Tape Recorder

____ Overhead Projector

____ 16MM Projector

____ Filmstrip Projector

____ Record Player

____ Slide Projector

____ Dukane - Cassette

____ Dukane - Record

____ Opague Projector

____ Graflex - Filmstrip

____ Graflex - Filmstrip with Cassette

____ Headsets

____ Listening Station

____ Extension Cord(s)

SPECIAL REQUESTS

____ Large Screen TV/VCR

____ Podium(s)

____ Microphone(s)

____ Other

____

____

____

____

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GREATER CAPITAL DISTRICT
Tech Prep
CONSORTIUM

SAMPLE
Role Model Orientation Agenda
Two Year College Development Center
University at Albany
Husted 208
Albany, New York 12222
(518)442-5590
Fax (518)442-3746

TWO YEAR COLLEGE DEVELOPMENT CENTER
TECH PREP EQUITY INITIATIVE
ROLE MODEL DINNER
April 5, 1994

AGENDA

I. Welcome - Dr. Susan Carleo,
Dean of Academic Affairs, Schenectady County Community College

Dr. Paul Mooradian
Director, The Two Year College Development Center

II. Overview of Tech Prep and the Capital District Consortium - Angela Prestigiacomo

III. Role Model Strategy
Distribution and Explanation of Handouts - Karen Brown

IV. Pilot Site - Gwen Williams and Roger Baff

V. Pilot Role Models Perspective

VI. Video segment from Pilot Project

VII. Site logistics
Questions and Answers

VIII. Collection of Role Model Confirmations and Equipment needs forms

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CONSORTIUM MEMBERS

Adirondack Comm. College; Albany-Schohane-Schenectady Vo-Tec Center; Columbia-Greene Comm. College; Fulton-Montgomery Comm. College; Hamilton-Fulton-Montgomery Vo-Tec Center; Hudson Valley Comm. College; Rensselaer-Columbia-Greene Vo-Tec Center; Saratoga-Warren Vo-Tec Center; Schenectady County Comm. College; SUNY College of Agriculture and Technology, Cobleskill; Washington-Warren Vo-Tec Center

Welcome Role Models
May 4, 1994

We are looking forward to our workshop with you on May 4, 1994. We hope you will find this year's programs enjoyable.

Until we see you next Wednesday, we thought you would like to know:

- Please try to arrive at Berne-Knox-Westerlo between 8:00 a.m. - 8:30 a.m. Please report to the High School office which is located on the 2nd floor. There you will be given your room assignments and any last minute instructions.
- You will need to be at your station by 9:00 a.m. to greet the first group of 8th graders. We have tried to keep many of you in the same room throughout the three sessions. However, some presenters will be assigned to more than one area.
- We have built in a couple of comfort station breaks so that you can leave your area for a few minutes before the next group arrives.
- The program part for the students ends at 11:10 a.m.
- Lunch and debriefing of the day's events occurs from 11:10 a.m. - 11:40 a.m. We hope you will be able to stay and enjoy lunch with us.

THANKS FOR SHARING YOUR TIME AND EXPERIENCES WITH OUR KIDS!

Matt Kirwan, Assistant Principal
Berne-Knox-Westerlo Office
Tel. 872-1482

Sample Role Model Day Scheduling Sheets

DRAPER MIDDLE SCHOOL CAREER DAY

On Thursday, May 11, all eighth grade students will be able to participate in a career day at Draper Middle School. You will have a chance to sit in small group sessions with a person who is employed in a specific area of work.

Each of you will have the opportunity to visit with four people who are doing jobs that you might like to learn about.

You now need to select your 6 top choices. We will try to give you your top choices but no promises will be made for your final selection assignments on May 11.

Number the **6** 3x5 cards that you have been given (see diagram) in the upper right hand corner 1-6. On the left top line print your name and homeroom number under it.

Name 1
Homeroom #

Name 2
Homeroom #

Now from the attached list choose your top **6** choices, with #1 being your first choice. Copy the letter and **bold copy** on the 3x5 cards (see example)

Name 1
Homeroom #

V. Chef

Continue until you have filled out all **6** cards.

Enjoy the day!

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CAREER AWARENESS DAY

Name:

Homeroom Teacher:

We are happy to announce that on Thursday, May 11th, the 8th grade students will be participating in a Career Awareness Day at the Middle School. It has been designed to help you begin the long process of thinking about the type of work you would like to do when you finish your schooling. Such choices may seem a long way off but you will already be starting high school next year.

The Career Awareness Day will provide you with the opportunity to visit with nontraditional career representatives who have jobs which you might have an interest in. "Nontraditional Career Representatives" are those women and men who are employed in occupations that are not traditionally associated with their gender. There will be three sessions occurring in the morning. Each session will provide you with the opportunity to meet in a small group with a person who is employed in a work area you would like to learn more about. You will receive information about their type of work and have an opportunity to ask additional questions.

Choose 2 Careers in Column A and 2 Careers in Column B. Use the following key to mark your answers in order of your interest in each career. We will try to place you in your top three preferences:

#1 - For the career of greatest interest to you
#2 - For your second career interest
#3 - For you third career interest
#4 - A career you have interest in, but not as much as your other 3 choices.

Column A

__ Funeral Director

__ State Trooper

__ Veterinarian

__ Chef

__ Niagara Mohawk Power Company

Column B

__ Truck Safety Coordinator

__ Nurse Practitioner

__ Elementary Teacher

__ Hairdresser

__ Artist

__ Architectural Landscaper

NON-TRADITIONAL ROLE MODEL/TECH PREP DAY

May 4, 1994

SCHEDULE

8:30-9:00
Pre-Activity Prep Period for Students (In Homeroom)
Role Model Arrival

9:05-9:40
Session I

9:45-10:20
Session II

10:20-10:35
Break
Students Return to Homeroom

10:40-11:10
Session III

11:10-11:40 Period 6
Lunch (Lunch will be provided for role models in the Library).
Students report to the Cafe.

11:43-12:10 Period 8
12:13-12:35 Period 10
Students will report to their Period 8 & Period 10 classes.

NON-TRADITIONAL ROLE MODEL PRESENTATION SCHEDULE

MAY 18, 1993

8:19 - 8:27 General presentation
Students receive schedule, map, list of presenters and sample questions

8:30 - 9:05 Session I
Doughnuts and juice

9:08 - 9:38 Session II

9:41 - 10:11 Session III

10:14 - 10:24 Debriefing in the cluster

LUNCH???? several academic and special teachers have lunch 5th period 11:10-11:50.

****

Approximately 12 students per session
4 presenters will be in the 8th Grade Cluster
2 presenters will be in the Home and Careers Room
4 presenters will be in the High School Cafeteria
Students rotate

It might be helpful if you could bring a "hands-on" experience for the students or have a brief demonstration of a typical work activity.

****

DIRECTIONS TO FONDA-FULTONVILLE CENTRAL SCHOOL:

TAKE THRUWAY TO EXIT 28 - WEST

LEAVING EXIT 28 - LEFT ON RIVERSIDE DRIVE - WEST

RIGHT ON RIVER BRIDGE (ROUTE 30-A)

RIGHT AT FLASHING RED LIGHT (ROUTE 5) HEADED EAST

CONTINUE ONE BLOCK ON ROUTE 5

LEFT ON CEMETERY STREET - CONTINUE UP THE HILL

THE SCHOOL IS ON YOUR RIGHT OFF CEMETERY STREET

Sample Schedule from Taconic-Hills

Name ____

First Period Teacher ____

Career Day Schedule

Session	**Program**	**Room**
______	Production Manager	Library
______	Welder	Cafe (kitchen end)
______	NYS Dept. of En. Con.	Cafe (by door)
______	Building Inspector	211
______	Registered Nurse	224
______	General Contractor	Tech.
______	Social Worker	212
______	Chef	205
______	State Trooper	200
______	Family Nurse Practitioner	203

Please Note: The numbers in the session column indicates the rotation of your courses. The **schedule must be strictly followed** to accommodate numbers in each class.

Session	**Time**
1	9:30-10:00
2	10:05-10:35
3	10:40-11:10
Wrap-Up	11:10-11:32 (Same room as session 3)

Note:

For Sample Role Model Activity Evaluation Sheets, please refer to the Assessment Section in this Guidebook.

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Gender Equity: Suggestions for Broadening Career Options of Female Students

Cheryl G. Bartholomew
Donna L. Schnorr

The past two decades have seen a substantial increase in the participation of women in the United States work force. From 1972 to 1986, the percentage of women working outside the home rose from 39% to 45% (Fullerton, 1987). By the year 2000, it is expected that four in every five women ages 25–54 will be employed (Hoyt, 1988) and that they will account for 47% of the total labor force (Kutscher, 1987). There is little doubt that this increase is closely associated with the changes in societal attitudes toward working women and economic necessity.

Although the majority of women are now working, gender equity in the labor force has not been achieved. Women are still concentrated in low-paying, traditionally female-dominated occupations (such as clerical and retail sales), whereas the majority of jobs in the higher paying, and often math- and science-related fields, are held by men (Ehrhart & Sandler, 1987; Sadker, Sadker, & Donald, 1989).

Underemployment has direct economic implications for women. Households headed by women are among the poorest in the country (Lottinville & Scherman, 1988; Sadker et al., 1989). In the coming decade, women may face further difficulty in the world of work because the occupational areas expected to experience least job growth are those in which women are already overrepresented (Gerstein, Lichtman, & Barokas, 1988; Hoyt, 1988).

The continued segregation and underutilization of women in the work force can have serious consequences. Evidence shows that career dissatisfaction can lead to a number of mental and physical problems (Herr, 1989). Ickovics (1990) found that underemployment has a negative effect on psychological well-being. From the literature that has emerged from several different fields, including economics, industrial psychology and counseling, Herr (1989) has concluded that personal adjustment and work adjustment are interdependent, and that "a variety of life difficulties and mental problems ensue when work life is unsatisfactory" (p. 6).

The majority of women and girls still plan to enter occupations that are traditionally dominated by women (Eccles, 1987; Gerstein et al., 1988). An important

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Cheryl G. Bartholomew is an associate professor in the Graduate School of Education at George Mason University, Robinson A326, Fairfax, VA 22030 and is the author of HORIZONS: 2000, Career and Life Planning Curriculum for Girls and Young Women (grades 5-12). *Donna L. Schnorr is a doctoral candidate at George Mason University, Fairfax, VA, and is a mathematics teacher and research assistant for* HORIZONS: 2000.

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reason is the internalization of gender-role stereotypes and cultural expectations of women and men. Traditionally, society emphasizes physical attractiveness, nurturance, sensitivity, and dependence in women, whereas men are characterized as being dominant, achievement-oriented, rational and assertive (Bem, 1974). Inculcation of these values, traits, and behaviors can seriously affect the individual's "perceived field of options" such that "activities classified as part of the opposite sex's role may be rejected without any evaluation or consideration" (Eccles, 1987, p. 141).

If young women's awareness and perceptions of occupations available to them are limited they may not realize their potential. Providing a career program that opens up the broad range of nontraditional fields available to female students and helping them to feel confident about pursuing these careers is critical. Counselor awareness and confrontation of gender stereotypes will both help to influence young women's decisions and to achieve equity in the work force.

Broadening career options for young women via a career counseling program requires counselors to (a) enhance counselor awareness of gender role stereotyping, (b) break down women's gender role and occupational stereotypes, (c) help women overcome math and science stereotypes, (d) improve young women's self-concepts, (e) enhance young women's self-esteem and self-confidence, (f) address their fear of success issues, (g) help female students formulate realistic family and life-planning goals, (h) examine their parental and peer influences, and (i) develop support systems.

COUNSELOR AWARENESS

Gender bias still pervades the school system—through the curricula, the instruction, and the role models that it provides for students (Sadker et al., 1989). This gender bias perpetuates occupational inequities between women and men and must be perceived and addressed by school counselors. As Hoyt (1988) observed: "Education is the primary means available for reducing bias, helping persons move out of poverty and preparing persons for employment" (p. 37). Schools must be more than mere advocates for change; they must be part of the change itself.

To recognize and address educational bias, it is essential for counselors to examine their own attitudes toward women's roles. As counselors, we do not intentionally hold stereotypical views but are overtly and subtly influenced by our culture. Therefore, self-examination is critical if we are to guide others without bias.

Additionally, counselors should evaluate career interest inventories because gender bias is still prevalent in many currently used interest inventories; occupations are dichotomized into men's work and women's work. Selection and use of inventories that are gender fair is imperative.

For example, the Non-Sexist Vocational Card Sort (NSVCS), developed by Dewey (1974), is described as a nonsexist method in that the same occupational options are presented to both sexes, occupational titles have been neutralized (fire fighter rather than fireman), and gender role biases are confronted and discussed. The NSVCS encourages women to form new self-perceptions and attitudes about themselves and to confront the issue of gender role stereotyping in career decision making. Teaching students how to overcome hindrances or obstacles (e.g., gender role stereotyping) toward pursuing a career is a critical aspect of career decision making.

According to Cole and Hansen (1975), educators should not wait for a society free of gender role stereotyping to evolve before we design interest inventories that reflect those changes. Presenting expanded career options for women in interest inventories will encourage exploration of a wide range of careers and thus provide increased opportunities. As counselors, therefore, we need to be actively using interest inventories that provide the same options for women and men.

Counselors also need to be aware of the language they use when describing occupations or roles (e.g., police officer rather than policeman, congressperson rather than congressman, "she or he" rather than "he," etc.). Language influences young women's identification with occupations and roles. Attendance at workshops that prepare teachers and counselors to communicate with and instruct students using gender-fair language and behaviors is essential.

CULTURAL EXPECTATIONS AND GENDER ROLE STEREOTYPES

According to Bem (1974), strongly gender-typed individuals are more likely to adjust their behaviors to conform to cultural norms than those whose gender role orientation is more androgynous. This link has been demonstrated in several studies with regard to career choice (Clarey & Sanford, 1982; Wolfe & Betz, 1981) and selection of college major (Gianakos & Subich, 1988). A study by Bridges (1988) also suggested that women are more prone than men to base their career choices on stereotypical considerations.

It is important that counselors help to reduce the impact of gender stereotyping by increasing students' awareness of societal attitudes and the ways in which stereotypes are perpetuated (e.g., media and advertising). An effective activity is to provide a questionnaire for young women that asks them to analyze how girls and boys (women and men) are portrayed in commercials, on television programs, and in magazines. These characteristics can then be discussed in terms of differential gender role messages.

Through this activity, young women discover that women are typically validated for their physical appearance and are usually portrayed in traditionally "female" roles (such as housework and taking care of children). Men are valued for their intelligence and ambition and are pictured in traditionally masculine roles (such as athletics and office or yard work). It is important to discuss how these messages can affect the career and life-planning choices that students make.

Because young people and adults can be influenced by seeing men and women portrayed most frequently in traditional occupations, an audiotaped activity titled, "Climbing Higher" (Bartholomew, 1993) can help students to become aware of how stereotypes have personally influenced them. Participants are asked to imagine that they are seated on an airplane that is on the runway getting ready for take-off. The audiotape features a female voice describing the plane's destination, weather conditions, flying altitude, and time of arrival. Following her dialogue, the female voice identifies herself as the pilot.

Participants are then asked to express their thoughts and feelings on first hearing the voice but prior to learning that the woman who is speaking is the pilot. Typically, activity participants identify the woman's voice as the flight attendant; it is upsetting for many to realize they had made a stereotypic assumption. The dialogue of the voice is typically something a pilot says when "in line" on the runway. Because the voice is female most people assume that she is the flight attendant.

This activity, used with a variety of traditional occupations, can be used successfully with students and counselors to create gender-bias awareness. The opportunity for discourse that is generated from this activity is invaluable and leads to awareness of gender role stereotypes that exist not only within our culture but within ourselves. Additionally, discussions on stereotypes that exist in our language (the use of fireman rather than fire fighter) can ensue and provide opportunities to consider the impact of these occupational stereotypes on young women. Many female students do not identify with particular occupations (e.g., pilot, fire fighter, construction worker) because they have only seen men in these fields or because our language refers only to men when describing these occupations.

Counselors must encourage students to explore and question cultural expectations of men and women, to develop strategies to deal with conflicts that arise from gender stereotyping, and to broaden the range of behaviors and activities in which female students engage. An important means for broadening young women's perceptions of the range of fields and roles available for themselves is by providing them with nontraditional role models. Counselors can provide opportunities for women and men who have chosen nontraditional careers and lifestyles (e.g., female pilot, male nurse, female chemist, male househusband) to speak with students. Additionally, videotapes of women and men in nontraditional roles and occupations can be shown.

It is also important to locate, display, and use supplementary career resource materials (flyers, posters, brochures) that reflect gender-fair language, and portray women engaged in nontraditional professions (e.g., the military, sports, technology, medicine). Information that historically reflects women's place in the work force should be made available. For example, Women Airforce Service Pilots (WASPS) flew missions in World War II. These women served their country as pilots by supporting the air effort at home and releasing male pilots for combat duty. The WASPS program was experimental in that females' ability to be pilots was being tested. Byrd Howell Granger (Public Broadcasting Service, 1993), one of the WASPS who served her country in World War II, stated in a program titled "Women of Courage," "I have never gotten into an aircraft yet that asked what sex I was. If you knew how to fly you flew, simple as that." These women faced many obstacles due to gender role stereotyping. After the war, the WASPS were sent a letter asking if they wished to become flight attendants, not pilots. Because many young people are not aware of women's contributions to our country via nontraditional careers, supplying information through videotapes and autobiographies instills pride and opens up young women's doors of identification with a broad range of fields.

MATHEMATICS AND SCIENCE STEREOTYPES

The stereotyping of mathematics and science as masculine activities can be a crucial factor in limiting women's access to math- and science-oriented occupations (Hyde, Fennema, Ryan, Frost, & Hopp, 1990; Sherman, 1982a; Singer & Stake, 1986). According to Sherman (1983b), "It is a network of sex-role influences which makes mathematics, and the careers mathematics are needed in, appear incongruent with the female role . . ." (p. 342). Sadker et al. (1989) reported that high school girls do not perceive mathematics as being important or relevant to career goals.

Young women must be able to identify with the math and sciences and be motivated to do well by realizing that these disciplines will inevitably and inextricably be useful to them. If they perceive only men in math- and science-related fields then they will not perceive that math and science are important to them. It follows, then, that young women will not go into the more advanced math and science courses if they do not perceive them to be appropriate or beneficial. Even if they begin to realize, as adults, that math- and science-related fields are appropriate career options for women, they will experience the consequences of a limited math and science academic background.

As Natalie, a female environmental engineer, explains to elementary students in a *HORIZONS: 2000* videotape titled "Way To Go?!" (Bartholomew, Hill, & Schnorr, 1993):

> The more choices you have, the happier you are going to be and I think that by sticking with math and sciences when you're young, you keep the door open and you keep a lot of choices open for yourself. And if later on you decide you want to narrow in and focus in and do something less technical or less math-oriented, that's always an option. But it's harder to go back in the other direction. Stick with it [math, science] for as long as you can and it will also give you a lot of choices down the road as far as what career you want to choose or what direction you want to take in your life.

The provision of female role models, through videotapes and as guest speakers in the math- and science-related fields, is essential if young women are to be able to identify with math and science and pursue these disciplines. Counselors can help math and science teachers become aware of and produce gender-fair instruction to enhance female student learning. Counselors can also help female students explore math and science careers, encourage girls to enroll in advanced math and science courses, and validate them for their intelligence and talents rather than for their physical appearance.

SELF-CONCEPT

Young women need to broaden the range of behaviors and activities in which they engage because, according to Yount (1986), "It is primarily through the channeling of activities that sex role stereotypes exert influence on the self-concept" (p. 66). Mentor programs are useful in that they provide opportunities for young women to be with professional women whom they can shadow at their workplaces and visit with personally to observe career and life-planning options. The type of interaction in which young women gain a realistic picture of the world of work and life-planning issues will help enhance young women's growing self-concepts and provide a broader range of roles and occupations with which they can identify. Counselors need to familiarize themselves with the women's organizations that are in their area, because they provide many resources for mentors and role models.

Activities that encourage self-awareness, confidence, risktaking, perseverance, and willingness to be a career forerunner are equally important for counselors to conduct. For example, an activity employed in the *HORIZONS: 2000* curriculum is the "Awareness Walk" (Bartholomew, 1993). Students are asked to take an imaginary walk through a forest. During the walk, they are asked to imagine and describe, in writing, what the forest looks like, how they go through it, and the outside and inside of a building they come to. General interpretations are offered that provide "a context in that to explore the meaning of the students' images" (Bartholomew, 1993, p. 67).

Young women learn a great deal about themselves through this particular activity, which relates directly to their behaviors. Some students, for example, stated that, through describing their trip through the forest, they realized how they had always taken the easy, less risky route in life, and they wanted to change that about themselves.

School counselors can use many creative activities to enhance female students' self-awareness and to increase opportunities for them to make more informed career and personal decisions. Counselors can also help young women to integrate these characteristics (i.e., personal traits and attributes) with their career decisions. It is essential for counselors to encourage female students to pursue a broader context of traditional and nontraditional career options through the presentation of these options in a nonthreatening context. Additionally, female students need to be provided with both the opportunity and the time to change personal traits if they feel they are a deterrent to pursuing their career or personal goals or both.

SELF-ESTEEM AND SELF-CONFIDENCE

The career development theories of Holland (1973) and Super (1957) presupposed that individuals select or reject occupations according to whether or not they are consistent with self-image. Society has traditionally viewed women as being less competent or capable than men. As a consequence, gender role socialization can lead women to have less confidence in their abilities and lower self-esteem than men. A study commissioned by the American Association of University Women (AAUW, 1991) revealed that loss of self-esteem in adolescents is far more severe for girls than for boys. Girls were found to "emerge from adolescence with a poor self-image, constrained views of their future and place in society, and much less confidence about themselves and their abilities" (p. 4).

There are many types of activities that can be used to enhance self-esteem and confidence. For example, counselors can ask female students to read a biography or autobiography of a woman (student's choice) who has made a notable personal achievement or contribution to society. The students can then write a book report or prepare a presentation. In the report, students could focus on the following issues: (a) the kinds of choices the woman has made, (b) the consequences of her choices, (c) the obstacles, if any, she has had to overcome, (d) what the student admires most about the woman, and (e) the positive aspects of the woman that they can identify in themselves or choose to emulate (Bartholomew, 1993).

With this type of activity, (i.e., learning about notable women) female students have the opportunity to learn about themselves (e.g., their interests, positive attributes). Additionally, young women can discover the realities of potential (personal and career) obstacles that women have had to overcome, and learn how these obstacles were overcome. This activity is designed to instill a sense of pride in young women as well as to enhance their feelings of self-esteem and empowerment. It is equally important, while raising young women's awareness of gender role stereotypes and cultural expectations, to instill within them the confidence that they can overcome these obstacles and accomplish their goals, whatever they may be.

An example of a self-esteem activity at the elementary level would be to have students create self-portraits, using cutouts from magazines and their own art work to create a collage. In creating their self-portraits, students would focus on their favorite activities or interests, talents, skills, abilities, school subjects they are good at, one or two positive words that friends would use to describe them, and three positive words they would use to describe themselves (Bartholomew et al., 1993). This type of activity is not only fun and creative for students, but it encourages them to think about their positive attributes, which helps enhance their self-awareness and self-esteem.

FEAR OF SUCCESS

According to Noble (1987), most gifted women, unlike gifted men, have at some time found it necessary to "hide their abilities in order to survive socially" (p. 371). Horner (1972) has attributed such behavior in women to a "fear of success." She believed that women will tend to avoid success if they anticipate negative consequences of succeeding such as social disapproval and loss of femininity.

Sherman (1983b) found evidence of fear of success among twelfth-grade girls who had enrolled in a fourth year of mathematics. Compared with their peers who had taken fewer mathematics courses (though test scores showed they were capable of four years of theoretical math), these girls showed more favorable attitudes toward mathematics but were more ambivalent about their intelligence and more likely to feel ill at ease with boys because of their intellectual ability. They also tended to "play dumb" more often than girls who had enrolled in only three years of math.

An activity titled "Fear of Success" describes how counselors can help female students recognize ways in which they may be undermining their talents and abilities (Bartholomew, 1993). This activity evolved from Horner's (1972) "Fear of Success" theory. Counselors are encouraged to use Matina Horner's projective story completion technique, which asks that students, after reading a sentence about either a woman named Anne or a man named John who graduated at the top of her (or his) class, write a paragraph describing her (or him). Horner (1972) saw "fear of success" at work if students made statements indicating negative consequences following any outstanding academic success. Negative consequences could include fear of social rejection, losing one's dating or marrying eligibility, or becoming lonely or isolated. Typically, due to cultural bias against intelligent, high-achieving women, students attribute more negative traits to Anne.

Horner (1972) found a tremendous difference between how men and women responded to the idea of success. Male students were excited and optimistic about the possibility of developing a successful career. Ninety percent of the men felt comfortable with the idea of success and saw this success as a way to gain points with women. On the other hand, this possibility for a successful career made 65% of the women experience anxiety, which ranged from disturbing to terrifying. Many of the women described Anne as an "acne-faced bookworm" and as "unattractively aggressive." Anne was characterized by some women as a person who would have "no qualms about trampling over others in her obnoxious pursuit of her own ambition." The main reason for the anxiety was the women's belief that doing well professionally would jeopardize the relationships they had with men.

Counselors are encouraged to lead a class discussion by having female students: (a) Describe examples of "fear of success" behavior that they have observed in females (e.g., letting a boyfriend win a tennis game), (b) discuss ways in which they have undermined or limited their potential by "fearing success," (c) consider why they think women (including themselves) act on this "fear of success" and whether or not it's a realistic fear, and (d) think about what might happen to them and other women if they begin to "go for it" (i.e., express their talents fully) and overcome their "fear of success" (Bartholomew, 1993). A journal entry is included in this activity so that female students can continue to reflect on and critically analyze any of their own and others' "fear of success" behaviors and positively counteract the limitations that fearing success imposes.

FAMILY AND LIFE PLANNING

If more women are to move into the upper levels of the occupational hierarchy, it is important to dispel the myth that a choice must be made between career and family (Noble, 1987). It has been shown that by choosing relationships that are compatible with their values and goals; accepting outside support, (such as child care); and developing flexible coping strategies (e.g., sharing household chores, enlisting family support); women can effectively eliminate or reduce the incidence of role conflict and lead healthful, satisfying lives (Gray, 1983).

Providing role models and mentors who have made a variety of life-planning choices, would help women to understand the multitude of options available to them. It is essential that women explore these options so they can be incorporated into their life-planning goals and decisions. Role models may also help to dispel the myth that there is only "one" correct or appropriate path for women and that child-rearing and working need to be mutually exclusive.

Another useful means for demonstrating a variety of life-planning choices is through the use of videotapes. The *HORIZONS: 2000* 5th- or 6th-grade curriculum (Bartholomew et al., 1993) offers a videotape called "Way To Go?!" in which options and choices regarding child-rearing, housekeeping, and work are explicitly discussed between wife and husband and by individuals in nontraditional fields. In one couple's case, the husband has decided that when they have children, he will stay home with the children because his wife makes more money and is better able to support the family. In addition, his occupation as a high school teacher affords more opportunities to be flexible over the summer months.

The couple also discuss how they share the household work; they have never considered that there are traditional "boy" or "girl" chores. Instead, they do whatever is needed according to whoever has the time. Additionally, the husband relates how he made the decision to move to the area where his wife had received a job offer as an environmental engineer, even though he did not have a job in this new area. Because his wife makes a great deal of money and is very satisfied with her work, this choice made the most sense to both of them.

It is critical for young women and men to be presented with these types of options and this type of open discussion between wife and husband regarding life-planning issues (sharing chores, child-rearing, moving due to new job offer). It is equally important to counteract the traditional view that it is the wife's responsibility to stay home with the children or to move when the husband must move because of a new job, and not the husband's responsibility, no matter what the circumstances. Young students need to view people in relationships who have chosen a broad range of roles, including shared household chores and child-rearing responsibility, so that their options relating to roles and careers are broadened.

PARENTAL AND PEER INFLUENCE

Counselors need to design activities that promote parental involvement with their child's career decision making and life planning. For example, many of the *HORIZONS: 2000* activities require that students share their responses to the questions on their worksheets with their parents. Questions are structured so that the students must ask their parents for information and feedback. For example, the activity titled, "Family Influences on Career Choice," requires that students "interview a family member (or other important adult) to determine the choices she or he made that led to her or his career or occupation," as well as other suggested interview questions (Bartholomew, 1993, p. 49).

The activity is designed to encourage students to learn about their family members' (or other important adults') careers or occupations, and to raise students' awareness of how family career choices can affect their own career choices. Activities that foster parental involvement provide an opportunity for open communication between parent(s) and daughter regarding the daughter's dreams and goals, and offers a chance for parents to provide guidance and support.

Peer influences should also be explored. Young women must be encouraged to recognize peer influence on their behavior and to discuss their perceptions of gender roles with male and female peers. An activity that can encourage discussion between female and male students is to have female students interview a male peer and ask him what he would do if his girlfriend (or wife) made more money, had a higher education, or became more successful than him. To avoid conflict, it is important for students to discuss these issues before making long-term commitments that are based on possible misconceptions.

The opportunity for female students to discuss "real-life" issues and future goals with men is important; by expressing their dreams and needs, young women will be able to assess whether or not their goals can be met with the partner they choose. If young women's career options are to be broadened, then young men, as well as young women, need to be educated regarding the limitations of gender role stereotyping.

DEVELOPING SUPPORT SYSTEMS

Houser and Garvey (1985) found that female students who enrolled in nontraditional (male-dominated) vocational training programs consistently received more support and encouragement from family, friends, teachers, and counselors than those who entered traditional programs. By fostering open and meaningful communication with their parents and peers, young women can build supportive networks through which they can explore and develop their personal roles, values, goals, and ambitions.

CONCLUSION

School counselors must encourage, and provide the means for, female students to explore the full range of available career and lifestyle options and to help them consider the potential costs, rewards and consequences of each option. Particular emphasis needs to be placed on the pitfalls of adopting a lifestyle through necessity or "accident" rather than choice. Research suggests that women who have not actively chosen their lifestyle are more likely to experience feelings of dissatisfaction and regret than other women (Bartholomew, 1988; Metha, Kinnier, & McWhirter, 1989; Rosen, Ickovics, & Moghadam, 1990).

Every young woman must recognize the importance of planning her own life rather than allowing others to define it for her. All options (e.g., homemaker, single career woman, married career woman) should be seen as valid, and

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based on personal preferences, values and goals rather than gender stereotypes. Additionally, young women must become aware of societal changes that are making it increasingly necessary for women to be financially independent.

As Eccles (1987) explained, girls reach critical decision points with an incomplete picture of the vocational world, a romanticized picture of traditional family roles, and incomplete information regarding the potential costs and benefits of various educational and vocational options. Without such information it is difficult to make a wise choice for oneself. Eccles indicated that the occupational stereotypes held by young women and men are typically ill-informed and, consequently, lead to a ruling out of occupations which would otherwise be appropriate choices.

Counselors can help administrators, teachers, and parents to become aware of how female students are being influenced via Parent-Teacher Association meetings, videos, parental open-house appointments, and printed materials. The possibilities that combat educational inequities can then be explored and remedial programs implemented.

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Counseling Office

We hope that you will take a couple of moments to complete this questionnaire. The information will help us assess our counseling services and methods. Thank you!

The primary reason I meet with the counselor is:

___ an academic concern.
___ career planning.
___ college transfer.
___ a crisis.
___ a personal matter.
___ other ____________________

The number of times I met with this person regarding the above concern is:

___ once.
___ two or three times.
___ four to six times.
___ more than six times.

From this meeting with a counselor, please indicate the extent to which:

1. you more clearly understand your concern or problem.

no more		some		much more
1	2	3	4	5

2. you have increased in self-knowledge and/or self-confidence.

no more		some		much more
1	2	3	4	5

3. you are better able to make a decision, determine your next step, or take your next step.

no more		some		much more
1	2	3	4	5

4. the questions, concerns, and/or needs about which you wanted to talk with a counselor were addressed.

no more		some		much more
1	2	3	4	5

5. Comments: ____

____

____

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Equity Workshop Sample Feedback Sheet

1a) From your perspective, to what extent were the major workshop goals achieved?

To finalize roles/responsibilities and other details of statewide conference	a) satisfactorily b) somewhat satisfactorily c) not quite satisfactorily
To provide informal opportunities for exchange, sharing and problem solving among participating colleges.	a) satisfactorily b) somewhat satisfactorily c) not quite satisfactorily

b) Please explain your rating: ______________________________

____

2) Other reactions/suggestions/recommendations regarding conference and/or other activities?

____

____

____

____

____

____

____

3) Any other thoughts? ______________________________

____

____

____

Please complete and hand in before leaving the workshop.
THANK YOU!

SAMPLE ROLE MODEL ACTIVITY
EVALUATION SHEETS

DRAPER MIDDLE SCHOOL EIGHTH GRADE
CAREER DAY
TEACHER SPEAKER EVALUATION

NAME__________________________________**DATE:** ____________

Please rate the day using the following rating system. Feel free to include specific comments in the space provided.

5 - STRONGLY LIKED
4 - LIKED
3 - NEUTRAL
2 - DISLIKED
1 - STRONGLY DISLIKED

AS A PRESENTER HOW WOULD YOU RATE:

1. Overall format of the speaker sessions. 5 4 3 2 1
COMMENTS:

2. The length of each speaker session. (35 min.). 5 4 3 2 1
COMMENTS:

3. The informational dinner meeting. 5 4 3 2 1
___________ did not attend.
COMMENTS:

4. The information you were given in preparing for the day. 5 4 3 2 1
COMMENTS:

5. Overall format of the team/group sessions. 5 4 3 2 1
COMMENTS:

6. Activities used during team/group sessions. 5 4 3 2 1
COMMENTS:

7. Assembly program. 5 4 3 2 1
COMMENTS:

8. Would you be willing to do this again?______________________________

9. Please give any suggestions you might have for planning this day in the future (Use back.)

STUDENT EVALUATION

Directions: Please circle the number which best indicates your response to each question.

Your grade level: ______ Your age: ______
Your gender: ______ Male: ______ Female: ______

		Low				High
1.	How much did you know about occupations & careers in nontraditional fields before the role model visits to your school?	1	2	3	4	5
2.	How much did the role model visits & classroom activities on this topic increase your knowledge about non-traditional occupations & careers?	1	2	3	4	5
3.	How helpful or interesting did you find each of the following?					
a)	The role models' descriptions of their job tasks & work situations	1	2	3	4	5
b)	The role models' descriptions of what it is like to work in a non-traditional field	1	2	3	4	5
c)	The role models' descriptions of how their jobs affect their personal lives (i.e.; marriage, family, family, child care, leisure time, social activities)	1	2	3	4	5
d)	The question & answer sessions following the role models' presentations	1	2	3	4	5
e)	The classroom activities before & after the role models' visits	1	2	3	4	5
4.	How much did you learn from the role models & classroom activities about how to prepare for a technical occupation through courses taken in school (i.e.; mathematics & science)?	1	2	3	4	5

For the following questions, please respond by writing a brief answer after each question; should you need more space to answer — please use the back of this paper.

1. Out of the three presentations you attended, which one was the most interesting to you? Why?

2. Do you personally know anyone in a non-traditional career? If yes, please list their name and career.

3. Are there any changes or ideas you could suggest to improve career day for next year?

DRAPER MIDDLE SCHOOL CAREER DAY
EVALUATION

DIRECTIONS: On the scantron answer sheet provided, indicate your gender on the space after the word NAME by writing MALE or FEMALE. On the line after the word SUBJECT, write the occupation of the presenter/role model that you found most interesting.

Mark the answers to the questions below for the corresponding numbers on the answer sheet.

1. How much did you know about the occupations and careers before hearing the role models/speakers?
   a) nothing
   b) very little
   c) a little
   d) quite a bit

2. How much did the role models/speakers increase or improve your knowledge about each career?
   a) not at all
   b) very little
   c) a little
   d) quite a bit

3. How helpful or interesting did you find the role models' descriptions of their job duties?
   a) not at all
   b) a little helpful/interesting
   c) quite helpful/interesting
   d) very helpful/interesting

4. How helpful or interesting did you find the role models' descriptions of what it is like to work in their fields?
   a) not at all
   b) a little helpful/interesting
   c) quite helpful/interesting
   d) very helpful/interesting

5. How helpful or interesting did you find the role models' descriptions of how their jobs affect their personal lives (e.g., marriage, family, child care, leisure time, social activities)?
   a) not at all
   b) a little helpful/interesting
   c) quite helpful/interesting
   d) very helpful/interesting

DRAPER MIDDLE SCHOOL CAREER DAY
EVALUATION - PART 2

Place an X on the line to indicate gender.

_______ MALE

_______ FEMALE

1. How interesting did you find the What's My Line poster activity?
   a) not at all
   b) a little interesting
   c) quite interesting
   d) very interesting

2. To what extent did the What's My Line poster activity increase your awareness about gender stereotypes in career choices?
   a) not at all
   b) somewhat
   c) quite a bit
   d) a lot

3. How interesting did you find the Lifeline activity?
   a) not at all
   b) a little interesting
   c) quite interesting
   d) very interesting

4. How much will the decisions you make today affect your future?
   a) not at all
   b) a little
   c) quite a bit
   d) a lot

5. Of the two activities, which one taught you the most about your future in the workplace?
   a) Lifeline activity
   b) What's My Line poster activity

6. How helpful or interesting did you find the question and answer sessions following the role models' presentations?
a) not at all
b) a little helpful/interesting
c) quite helpful/interesting
d) very helpful/interesting

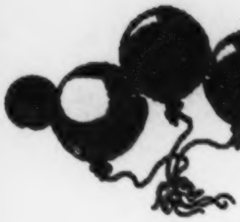
7. How much did you learn from the role models' presentations about how to prepare for jobs similar to theirs?
a) not much
b) a little
c) quite a bit
d) a lot

8. Were you able to see the speakers that you ranked in your top six choices?
a) all the time
b) most of the time (3 to 6 of the choices)
c) not at all

9. Did you feel that there was enough time allowed for the speaker presentations?
a) not enough time
b) need a little bit more time
c) need a lot more time
d) just right

10. Do you feel that this career day program was a worthwhile activity?
a) not at all
b) a little
c) quite a bit
d) a lot

11. Is there a career speaker you would have liked to hear but was not represented? WRITE THE NAME OF THIS CAREER/OCCUPATION ON THE BACK OF YOUR SCANTRON SHEET.



Career Day
at
Hudson Valley

Evaluation

Did you like the activities?

What did you like best?
Why?

What did you like least?
Why?

Is there anything you would change to make it better?

Was it a good idea to have an all boys day?
Why?

Today I learned..........

Would you come again?

MATH
HISTORY
ART

Cohoes Middle School

7 Bevan Street
Cohoes, NY 12047
237-0727
FAX 237-2253

MATH
HISTORY
ART

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Note:

All bibliographies are alphabetically ordered by **title**.

NATIONAL OCCUPATIONAL INFORMATION COORDINATING COMMITTEE RESOURCES

Available for free loan from
The New York State Career Options Institute
6 British American Boulevard, Suite G
Latham, New York 12110
(518)786-3230 or fax (518)786-3245

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6 British American Boulevard, Suite G
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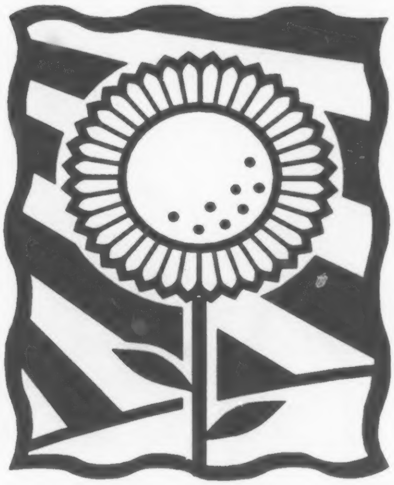
Toward a Challenging Future

A Practitioner's Guide for Student Career Exploration in New York State



Part Three: Staff Development 3

3

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About Staff Development

We caution you not to accept the notion that a one-time staff development program will suffice — there must be a long-term commitment from those involved in order to reach goals and to bring about positive changes.

The most successful staff development programs are those that are designed to meet the needs of the local area. Involving members of the staff by creating an equity planning team to develop staff training programs is essential if staff development is to be regarded as necessary and meaningful.

We caution you not to accept the notion that a one-time program will suffice. There must be a long-term commitment with the goal of infusing equity into all aspects of the program if real strides are to be made.

This section includes resources for administrators, counselors, and teachers to carry out self-study, checklists to help plan and conduct staff development, instructional strategies, activities which would be appropriate for equity workshops, a sample math/science workshop and additional references. Program designers may use the materials and models to customize programs to meet the needs of your particular staff and programs.

Staff Development and Equity

The most successful staff development activities are designed to fit the needs of those involved.

Staff development is the primary and most often used equity strategy. Many equity training packages have been written and are available. However, the most successful staff development activities are designed to fit the local needs of the school district, occur over time, and are infused in the local inservice plan. Most equity staff development activities consist of awareness-raising workshops or training sessions that address a variety of topics such as building knowledge of civil rights and nondiscrimination laws, identifying where bias and stereotyping exist in schools, and providing rationale for sex equity.

An important element of any equity inservice is a discussion of why equity should be important to staff, what the benefits are, and how staff can address equity in their roles as teachers, counselors, and administrators.

Those conducting staff development activities hold the key to success. Presenters must be knowledgeable about equity issues and sensitive to the needs of staff members. When considering a staff development activity, include the components of planning, implementing, and evaluating.

When Planning a Staff Development Activity

Staff development presenters can provide exemplary activities by following guidelines which include planning, implementation, and evaluation.

Involve members of the equity planning team in all aspects of a staff development activity. They can help develop a list of possible equity topics and potential sources of equity expertise, such as university and vocational, technical, and adult education staff, and Vocational Equity Leadership members from each cooperative educational service agency.

Develop checklists to help make decisions about staff development goals and objectives, the needs of its target audience, its format, topics, available resources, speakers, and how the information will be presented.

Select an appropriate format for the activity for the activity. These formats can include:

- a stand-alone equity inservice, from one hour to one week in length;
- a sectional presentation in which equity is addressed as part of a larger inservice;
- a regional or statewide conference; or
- an infusion of equity into other staff development activities, such as education for employment, development guidance, or at-risk youths.

When Designing the Activity

Adults often enter staff development sessions with questions such as, "How will this training help me with the problem I'm having with...?"

Design the activity while keeping in mind the following adult learning principles.

- As individuals become adults, they move from a self-concept of dependency to one of self-directedness. Thus, the training must allow participants to be self-directed. Otherwise, the participants may perceive themselves as being treated as children and will be resistant or hostile toward the training.
- As people mature, they accumulate more and more experience. This makes it necessary to tailor adult instruction on an individual basis, drawing upon each person's experience.
- Adults tend to learn things based on internal motivation. Thus, trainers should respond to the participants' needs in a timely fashion and should help them articulate needs of which they may be unaware.
- Adults have a problem centered orientation which makes them look for immediate answers. They often enter training sessions with questions such as, "How will this training help me with the problem I'm having with ...?" or "From what I've learned today, what can I do differently on Monday?"

Set the Stage Prior to the Activity

Conduct the activity in a manner conducive to learning.

- Before beginning the activity, make the participants feel comfortable and at ease. Welcome them: introduce them to staff members and key people; provide them with refreshments, locations of rest rooms, and an agenda. Comments from the official host, such as the principal or district administrator, can help make participants feel that the activity is important and well worth their time and effort.

- Validate the agenda. According to Matthews and McCune (1978): "An activity involving participants in identification of their concerns and problems at this point gives an indication of willingness to deal with their concerns and provides opportunities for modification or focusing of the activities to come."

Build Upon What People Already Know

Begin cognitive activities by introducing a base of information upon which the rest of the training is built. Examples of such introductory cognitive material include requirements of local, state and federal laws or research findings on the impact of sex bias.

Cognitive activities also should include a question-and-answer period to ensure that participants understand the information being presented. Answering questions also shows that the trainer is responsive to the participants' concerns.

- Allow time for practical application of the concepts being taught. This activity lets participants relate the new information to their own situations. This can be done individually or in small groups.
- Encourage skill development by giving participants opportunities to develop and practice the skills they shared in the practical application phase of the training.
- Provide participants with guidance in selecting new action they can take back to their classrooms. Some actions may be individual, others may be organizational. This activity helps participants determine what they can do and how they can begin planning for the new actions.

Conduct Evaluations Using Guidelines

Conduct evaluations of the staff development activity using some or all of the following guidelines. Whether it's a workshop for 15 counselors or 700 teachers, the activity needs to be evaluated. The evaluation need not be elaborate. In fact, it may be very simple -but it needs to take place.

- Base the evaluation on the activity's goals and objectives. This means the goals and objectives must be clearly stated before an accurate evaluation can occur. Indeed, goals and objectives should be clearly defined before the activity is developed.
- Evaluate all aspects of the training event, including the instructional techniques, the skill and knowledge of the facilitator and the resource people, the publicity (for example, flyers, brochures), the facilities , and the training materials.
- Use the evaluation feedback as a needs assessment for follow-up training and program modification. New workshops can create an awareness of other needs and can suggest a myriad of activities with which to meet those needs. An effective evaluation can identify those needs and give direction to future activities.

Tips and Cautions

- Structure the activity so people are invited, not ordered, to attend. For example, have the principal or staff members nominate or select participants to attend.
- When selecting the time for a staff development activity, avoid high stress, nonattentive times like the end of the semester or time close to vacation. Be sensitive to the climate and timing in the local district as different issues will b of concern.
- Avoid introducing equity as a "new or add-on initiative." Rather, focus on how equity is and can be infused into curriculum, student learning experiences,

If the training is to be conducted by someone outside the school, solicit recommendations before hiring anyone, "preview" the speaker personally when possible.

- Point out how equity staff development is an issue related to excellence in education and higher achievement for students.
- Use the equity planning team and other advisory committees to assist in the planning. Doing so can identify and build support for the equity program.
- Invite people from other schools who have had successes to share their experience.
- Be aware of the environment where the training is being conducted. Check the facility ahead of time for lighting, electrical outlets, soundproofing, and privacy.

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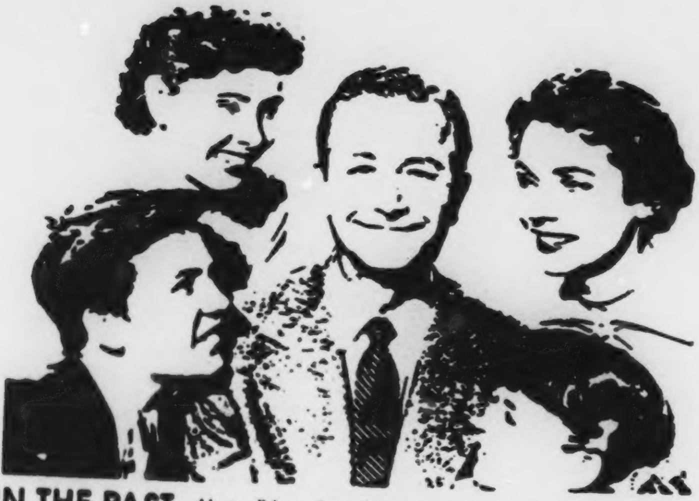

IN THE PAST, *the "typical" American family was idealized in TV shows such as "Father Knows Best," where Robert Young worked and Jane Wyatt stayed home with three kids.*

A New

Teachers Confront Biases in Sex Equity Training

by Carol Whitney Darling
and Steven E. Sorg

We recently passed the 20th anniversary of the landmark Title IX of the Education Amendments of 1972, which prohibits discrimination on the basis of sex in educational programs receiving federal funds. While gains have been made, it's not yet time to pop the champagne corks.

Sex equity practices still are not used consistently in classrooms across the country. One reason is that "discrimination on the basis of sex" is difficult to define, much less prove. Another is that individual classroom teachers may unconsciously help perpetuate sex-role stereotypes.

For years researchers have produced studies showing teachers do not treat girls and boys equally, but the research has not received mainstream media coverage. Then, in 1992, the Clarence Thomas hearings of the Senate Judiciary Committee brought national attention to sexual harassment in the workplace.

Also in 1992 came the report *How Schools Shortchange Girls*, which is a synthesis of available research on sex equity. This time there was a firestorm of media coverage, including weeks of segments in the syndicated cartoon *Doonesbury* devoted to the subject.

Given the renewed concern over sex equity in education, administrators now realize that legislation alone is not going to solve the problems. Teachers—who have such potential to affect the self-esteem and goals of students—are the key.

What the research says

Why do teachers need to care about sex equity? For one, the workforce for which they are preparing students is changing. By 2000, women will represent almost half the workforce (47 percent). Four-fifths of new entrants into the workforce will be women, minorities and immigrants. Women with children are in the labor force in greater numbers than ever.

The idealized American family with a father who works and a mother who cares for the children and does not work outside the home is a reality in only 6 percent of all households. Trends indicate that once in the workforce, women are not going "back home."

So female students, as well as male students, must be prepared to enter and succeed in this workforce environment. Logically, this means both sexes should receive an equal education. But that's not necessarily happening.

Researchers David and Myra Sadker of American University identify these

***TODAY,** families come in all shapes and sizes. In CBS's "Murphy Brown," the lead character is a network news anchor and single mother—by choice.*

ATTITUDE

The idealized American family with a father who works and a mother who cares for the children and does not work outside the home is a reality in only 6 percent of all households.

teacher behaviors that help to perpetuate sex role stereotypes and create a classroom atmosphere that hinders the ability of female students to reach their full potential:

- giving more and better attention to male students
- giving more academic criticism and remediation to male students
- giving less attention, feedback and instructions to female students
- asking male students more complex, abstract questions
- calling on male students more frequently
- encouraging male students to be assertive
- telling female students they aren't as good in math and science as male students
- having different expectations of male and female students.

The "shortchanging girls" report, commissioned by the American Association of University Women Educational Foundation in 1990, assessed self-esteem, educational experiences, interest in math and science and career aspirations of 3,000 students. The study found:

- Girls suffer a loss of self-confidence and self-esteem during adolescence.
- Family and school—not peers—have the greatest impact on self-esteem.
- Girls and boys who like math and science have higher self-esteem and self-confidence and have higher career goals.

For the most part, the evidence is that teachers don't intentionally favor male students over female students. But in some training programs, when teachers are shown videotapes of themselves in the classroom, they're often surprised at what they see themselves doing in this regard.

Recognizing the importance of teachers, who have such potential to affect the self-esteem of students, many states are making teachers more aware of the need for equity in the classroom. Although equity training generally is not a high priority of school administrators, most do support it.

Teachers receive the training primarily through inservice workshops ranging from 90 minutes to three days. These workshops are delivered through state departments of education and through district and school-level staff development programs.

Common topics for teacher training are teaching strategies, sexual harassment, recruitment of students, students' legal rights, strategies for enhancing students' self-esteem and discrimination.

In-service training is one method of

increasing teachers' awareness of equity issues. The most effective model brings teachers together for several days of training with follow-up in the classroom. Advocates believe equity training should begin in teacher education programs. The involvement of parents is desirable, although some conservative parents are not willing to discuss sex equity.

Here are some examples of sex equity programs in schools:

- A four-year-old sex equity program in Kentucky trains 20 vocational teachers a year. Teachers participate in a micro-teaching unit where their simulated classroom behaviors are coded for sex fairness by other teachers in the workshop. After the three-day workshop, teachers return to their districts and pass on their newfound knowledge to other teachers.
- Teachers in some Florida districts participate in "Expanding Your Horizons in Science and Mathematics" programs, which are run by state universities. In these programs, female students in grades 8-11 participate in high-level math and science activities and are exposed to engineering, scientific and technical careers.
- Each Vocational Planning District in Ohio must describe its goals and objectives for teacher training on equity issues. A cadre of trained vocational teachers conducts in-service training for school districts that request it. Session topics include facts and figures on legislation pertaining to equity in education and research findings by the Sadkers and AAUW.
- Minnesota's Pine Technical College has developed a teacher's guide to bias-free language called *Language Makes a Difference*. Teachers are asked to "count" interactions with male and female students, such as high-level questions, encouragement, praise, academic and non-academic criticism. The goal is to encourage teachers to conduct a critical self-analysis, to recognize bias and to develop strategies to overcome it.
- In Phenix City, Alabama, district staff development officials provide workshops for vocational teachers that include activities in writing lesson plans to address sex equity issues. The district also sponsors a contest for students in which winning posters depicting sex equity issues are professionally printed and distributed to all district schools.

Advocates recognize that while it is encouraging to see sensitivity training programs for teachers being introduced in many states, there's still a long way to go. Before students and future workers can expect to learn and work in sex-fair environments, there must be a systematic plan for training in each state that includes teacher education programs.

About the Author

Carol Whitney Darling is project director of the Center for Education Research and Development at the University of Central Florida in Orlando, Florida.

Steven E. Sorg is an associate professor and director of the center.

Vocational Education Journal. Darling, Carol Whitney and Sorg, Steven. "A New Attitude" March 1993. Copyright 1993 the American Vocational Association. Reprinted by permission.

SUGGESTED STRATEGIES FOR ADMINISTRATORS

The following strategies are suggested approaches that administrators can use to develop and maintain gender equity within the school and the district. Some of these strategies can be implemented quickly and others will take additional time and resources. By utilizing the tools and activities provided as well as the information contained within this document, administrators should be able to make necessary changes to ensure equity essential for all students. The ideas presented here are intended are starting points and should not be considered as the only answers. Hopefully, these strategies will stimulate administrators of the possibilities available.

Supportive Climate

- Provide adequate facilities, maintenance, equipment and instructional and resource materials for all programs so that both sexes can participate equally.
- Review funds appropriated for faculty, facilities, and equipment of traditional single sex classes to insure equitable funding of traditionally make and traditionally female classes.
- Secure grants for innovative programs related to the provision of sex equity.
- Provide support services, such as counseling, job development and job follow-up for students in nontraditional occupational areas.
- Monitor participation in occupational student organizations to encourage equal participation.
- Avoid overemphasizing the assured difficulty of non-traditional students in finding related employment.
- Increase teacher/counselor awareness and responsibility for enrollment patterns in the school.
- Do not assume that female personnel are less sex biased in their attitudes and behavior than male personnel. There is a wide range of individual differences in these attitudes.
- Encourage enrollment in college and graduate level courses offered on the topic of sex bias.
- Encourage attendance at professional meetings and conferences that deal with sex equity (offer inservice credit for attendance, provide release time and/or conference fees).
- Include sex-fair teaching techniques in faculty evaluations.
- Offer inservice training programs which stress the importance of expanding options for males and females in careers and family life preparation.

  Possible topics are:
  - current and future opportunities and earnings in the labor market
  - nonsexist writing workshop
  - legislative updates on Title IX, Carl Perkins, etc.
  - recognizing sex-biased teaching behaviors
  - nontraditional role models from community
- Develop a projected timetable to eliminate sex bias in administrations, faculty and student body.
- Commit time and resources necessary to have a nonsexist environment.

- Recruit men and women for nontraditional positions.
- Advertise job openings through local, professional and trade organizations, emphasizing equal opportunity for both sexes.
- Seek applicants from postsecondary institutions who train occupational teachers of both sexes.
- Publicize job openings through local businesses and advertise job availability locally.
- Utilize the local "grapevine" for locating potential applicants (including knowledgeable sources such as faculty, cooperating businesses, women's groups, professional and trade organizations.
- Review all recruitment materials for overt and covert sex-biased language and illustrations.

Communication and Publicity

- Utilize school communication networks, such as newsletters and memos, to reinforce the importance of eliminating sex bias by providing information and resources for teacher use.
- Use time at regularly scheduled faculty and departmental and guidance meetings to increase awareness of sex bias.
- Publicize the availability of information, films, media, etc. on the issue of sex stereotyping and bias for teacher use in classrooms and at faculty/department meetings and staff development.
- Share relevant publications and articles that illustrate the success of individuals in nontraditional careers.
- Advertise existing programs and institutional interest in enrolling nontraditional students of both sexes.
- Encourage nontraditional teachers to serve as resources.
- Develop public service announcements to be used by local television and radio stations.
- Prepare a status report each year on all accomplishments related to the plan of action.

Courses and Scheduling

- Revise and schedule programs to encourage all students to participate in consumer and homemaking education.
- Monitor class schedules so that both sexes can participate equally in all occupational education programs.
- Increase efforts to introduce all preadolescent students to all types of work, especially vocational/technical training.
- Increase efforts to have all students enroll in math, science and technology courses.
- Attract students to nontraditional training on the basis of interest, ability and working conditions through earlier and broadening hands-on experiences, especially in elementary grades.

- **Examine courses for differential offerings and/or entrance requirements for males and females enrolled in the same course.**

- **Examine the criteria established for acceptance or rejection of course proposals to assure that they are not biased toward traditional male and female interests exclusively.**

Materials

- **Utilize sex equity task force and/or department faculty or citizen volunteers to establish sex fair criteria for district textbooks, and A-V recruitment materials.**

- **Utilize the libraries as a school resource to set up displays and familiarize students and teachers as to available materials that portray workers and students in nontraditional areas.**

Community Relations

- **Cooperate with other schools at all levels to break down stereotypes of both sexes.**

- **Meet with equal rights groups to publicize school concerns and benefit from their experience.**

- **Hold open meetings with students, faculty, parents and community advisory council to discuss needs.**

- **Have faculty and administration observe nontraditional workers in industrial settings.**

Source: Administrator's Guide to Bias-Free Classroom, CETA, 1993.

Sample Administrative Strategy Activity

Guide to Interviewing Job Applicants: Selecting the Nonsexist Staff

The following activity, by E.I. Newcombe, is adapted from *Becoming Sex-Fair: The Tredyffrin/Easttown Program*, Women's Educational Equity Act Program, 1979.

Acceptance of the goal of nonsexist education by a district gives administrators the important responsibility of selecting a staff capable of achieving that objective. Because there is no formula for identifying the best-qualified nonsexist candidate, it is necessary for administrators who are sensitive to the ideals of sex equity to evaluate a complex set of attitudes, behaviors, knowledge, and skills during the employment interview. In assessing the potential staff member it is helpful to realize that individuals who are sex fair in their approach to education probably did not become that way by accident. Rather, they probably overcame strong societal counterpressures because they value equality highly, a belief that often will surface during an interview.

Reminders for the Interviewer

To evaluate sex fairness in others successfully, interviewers first must understand fully the goals of equality in education, and second must act themselves in a sex-fair manner. Applicants for a position cannot be expected to display values that they believe oppose those of the interviewer. Questions that traditionally have been asked of only one sex are often sexist in intent and thus inappropriate; for example, applicants should not be asked how they plan to care for young children in their families unless that question is asked routinely of both sexes. Similarly, they should not be asked if they are willing to assume nonclassroom duties, such as handling discipline on the school grounds, unless that question is asked of both men and women.

Evaluation Criteria

The interviewer should be able to evaluate the sex fairness of applicants after observing and questioning them.

- Candidates are well acquainted with the general *goals of nonsexist education* and can apply such objectives in practical situations; for example, they believe that students should have equal access to all educational experiences, and therefore they encourage students to try activities traditionally favored by the other sex.
- Candidates display *positive attitudes toward equality in education*; for example, they acknowledge the importance of equality and show a willingness to work to eliminate sexism in the schools.
- Candidates exhibit *sex-fair behavior*; for example, they use sex-fair language.
- Candidates possess the *skills and techniques* necessary to provide nonsexist education and to correct the problems of sexism; for example, candidates have ideas for supplementing educational materials that treat the sexes equally.

Interviewing Techniques

A combination of indirect assessment and direct questioning techniques may be used to elicit the sex fairness of potential employees and to gain information regarding the evaluation criteria. Indirect assessment such as the observation of behavior is a helpful check on the sincerity of beliefs, and direct questions allow the interviewer to explore a candidate's depth of understanding and commitment. By using indirect assessment early in an interview, an administrator can evaluate some attitudes before clues are given that may bias later responses. Suggestions for both techniques of interviewing are listed below.

Indirect Assessment. The interviewer can indirectly assess the candidate in the general employment interview.

- Observe sex-fair or sexist behaviors that the candidate may exhibit during the interview.
- Note the attitudes toward sex equity that the candidate may reflect in their personal goals or interests.
- Give the candidate several everyday school dilemmas, some of which consider issues of equality, and note how he or she resolves the problems.
- Ask the candidate to evaluate educational materials, and note whether he or she comments on sex stereotypes and bias.
- Give the candidate a list of concerns facing education, and note any comments the candidate makes about sex fairness in education.

Direct Questioning. After describing the school district's involvement, the interviewer might indicate that he or she would like to discuss nonsexist education and ask direct questions:

- Is there any incident, either sexist or sex fair, in your own educational background that made a significant impact on you?
- What are the goals of nonsexist education?
- What general sexist behaviors do you feel occur frequently in the school environment?
- What have you done in the past within your own area of responsibility to ensure nonsexist education?
- What changes do you feel are necessary in order to realize the goals of nonsexist education?
- What course work and training in sex equity have you completed?

You may wish to develop an interview form to use in evaluating candidates for sex fairness. A sample interview form follows.

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ASSESSING THE CLIMATE

A Personal Checklist for Educators Committed to Equity

☐ Using nonsexist language, i.e., not referring to doctors, athletes and lawyers as "he" and nurses, secretaries, and hair stylists as "she."

☐ Using examples in teaching which show men and women with a wide range of feelings, interests, and career choices.

☐ Supplementing inadequate treatment of either sex in classroom materials by adding information and by discussing the inaccurate information, portrayal of roles, etc.

☐ Avoiding comparison of students based on gender, e.g., "the girls' papers are much neater than the boys'."

☐ Giving equal attention to girls and boys; assigning classroom, library, gym, and office jobs without regard for gender.

☐ Allowing students to express values and feelings without regard to sex, i.e., both boys and girls can be assertive and gentle, etc.

☐ Helping students explore all vocational interests, not only those traditionally associated with their sex.

☐ Expecting equal academic performance from girls and boys in all subjects.

☐ Expecting the same range of behaviors, language, dress from boys and girls; disciplinary responses are equitable both in terms of swiftness and severity.

☐ Using visual materials in classrooms and public areas which depict women, men, girls, and boys in a wide range of activities, careers, etc.

☐ Ensuring that all printed materials equally feature and report the extracurricular achievements and activities of all students.

☐ Encouraging boys and girls to participate in a variety of extracurricular activities and to compete for leadership positions in clubs and class activities.

☐ Challenging sexist language, expectations, and behavior displayed by students, colleagues, and parents.

SOURCE

ASSESS (Assessing Sex Equity in Schools and Society), Michigan Center for Career and Technical Education, Michigan State University. East Lansing.

Copied from Gender Equity--A Guide for Staff Development, Florida.

Are You a Fair Teacher?

After combing through research and training material on sex equity, authors Carol Darling and Steven Sorg have designed this CHECKLIST for the "gender-fair" teacher:

- Monitors own classroom behavior, language and body language for stereotypes and sexist generalizations.
- Uses gender-fair language; avoids "he" and "she" when referring to specific workers (such as "he" for welders and "she" for nurses).
- Searches for instructional materials that depict women and men in a variety of occupational and recreational activities.
- Supports students who are enrolled in vocational programs not traditional for their sex.
- Encourages all students to develop leadership skills through participation in vocational student organizations.
- Encourages students to make career decisions based on skills, abilities and goals; not gender.
- Infuses awareness of equity topics into the curriculum, such as sexual harassment, sex-role stereotypes and sex discrimination.
- Serves as an example of nonsexist behavior and language for students and school staff.
- Provides opportunities for male and female students to work together on teams to solve problems.
- Provides equal attention, instruction, feedback, academic criticism and praise to students of both sexes.
- Is consistent in student achievement expectations, grading, dress, discipline, behavior and duties.
- Encourages female students to enter high-wage, new and emerging technical occupations.
- Mandates that students treat each other as equals.

Source: Vocational Education Journal, March 1993, Volume 68, No. 3.

Gender-Fair Teaching Rating Sheet

	YES	NO
1. I am aware of gender biases in schools and how they affect students.		
2. I know my own gender biases and how they have affected my students and me.		
3. In verbal interaction:		
a. I praise males and females equally for academic and nonacademic behaviors.		
b. I criticize males and females equally for intellectual quality and effort in academic concerns.		
c. My criticism of males and females is equally harsh or mild in nonacademic concerns.		
d. I ask an equal number of low-level and high-level questions of females and males.		
4. In nonverbal situations:		
a. I maintain eye contact with male and female students on an equal basis.		
b. I position myself in the classroom with respect to students on an equal basis.		
c. I use reinforcement behaviors equally.		
d. I provide equal "wait time" to males and females.		
e. I arrange gender-fair seating and group work tasks.		
f. I equally distribute assigned tasks.		
5. I use only gender fair curriculum materials.		

	YES	NO
6. I openly deal with gender-biased materials to counteract their effects on students.		
7. I encourage nontraditional career options.		
8. I provide nontraditional role models for my students.		
9. I recruit students who are nontraditional for my class.		
10. I provide support for nontraditional students to remain in a nontraditional program.		
11. I make suggestions for policies and procedures in my school that will improve schoolwide gender fairness.		
12. I use strategies to counteract societal influences and cultural myths that hamper students.		
13. I follow an action plan to promote gender fairness in my class.		
14. I read and use the results of applied research to improve gender fairness in my class.		
15. I conduct research in my field on aspects of gender fairness and report my findings in journals where my peers can benefit from my studies.		

TOTAL	**15**
Mastery Level	**12**

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Classrooms

LOOK FOR:

☐ **Teacher attention** to students to see if there is a balance of attention given to both genders. Do teachers inadvertently call on one gender more than the other?

☐ **Gender patterns** in student responses to see if a dominant gender pattern emerges.

☐ **Use of air time.** Is it shared or do boys shout out and interrupt while girls hold their arms in the air and patiently wait and wait and wait?

☐ **Classroom seating** to determine if space is assigned by gender. Who sits in the front and who sits in the back? How are students grouped? Is self selection of seats resulting in gender segregation?

☐ **Competitive exercises** to see if students participate in cooperative learning activities that encourage girls and boys to work together effectively, rather than "boys vs girls" activities.

☐ **Classroom maintenance chores** that are not assigned by traditional roles like "women's work". Who runs the audio-visual equipment and waters the plants?

☐ **Efforts to discuss and eliminate bullying behavior.** Who is bullying and what are the results? Is it really the beginning of sexual harassment?

☐ **Pilot programs, learning centers, team teaching,** and other special projects that are based on bias-free instruction and collaboration.

☐ **Patterns of reinforcement** for creative ideas. Who does the suggesting and who does the listening? Are the ideas of girls heard and acknowledged?

☐ **Leadership roles** that are not divided on the basis of gender into "leading" and "assisting."

☐ **Participation by all students** to ensure that no one gender dominates. Are marginal students sidelined in activities?

Classrooms (continued)

LOOK FOR:

☐ **Patterns of responsibilities and rewards** to determine if students are receiving equitable challenges, opportunities and encouragement.

☐ **Designated areas** to see if apparatus and resources are neutral and both genders are encouraged to participate. What is the makeup of a student group working on a science experiment? How many girls are climbing the rope ladder? Establish "kitchen time" for boys and girls in younger grades, and "lab time" in all grades.

☐ **Lesson content in a Social Studies Class.** Given the challenge to name twenty famous American men and twenty famous American women, are the students able to do it? Are the teachers? Are specific objectives on gender equity included in all grades and in all types of programs?

☐ **Classroom structure** to eliminate the exclusion of students. Is an ongoing effort made to create a positive environment that is gender neutral and encourages acceptance of diversity? Are students encouraged to get to know the other gender as individuals?

☐ **Lesson content in a Science class.** Are assumptions made about interest and ability in science? Check for access to hands-on activities, and opportunities for students to become familiar with equipment.

☐ **Equity in literature.** Ask your kindergarten teacher or librarian if they have ever read from Father Gander: The Equal Rhymes Amendment. Can you find a copy of Nursery Rhymes: Mothers of Invention in your school's resource center? Do your social studies and science teachers know that Catherine Greene played a big role in inventing the cotton gin? (See the section on Instructional Resources.)

☐ **Computer lab participation** in non-instructional time to determine if it is a gender dominated space and why. Consider posting a time for girls if you find that male domination is the practice. Does the selection of software programs inspire girls to use the computer?

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Classrooms (continued)

LOOK FOR:

- ☐ **Toys and manipulatives** for all students that promote spatial and reasoning skills as well as poetry writing and artistic expression.
- ☐ **Advanced placement enrollments** to see if classes equitably represent the student population. Do female students need more information and encouragement in order to participate in new technologies and to aspire to careers in the field of math and science?
- ☐ **Remedial reading groups and one-to-one tutorials.** See if gender patterns exist in remedial after-school assistance. Do both genders feel free to ask for extra help?
- ☐ **Suspensions, truancy and disciplinary referrals** to see if they indicate a pattern of gender that is proportionate to the student body. If not, ask why.
- ☐ **Classroom interaction dynamics.** Note who does the bragging, who interrupts, who yells out, who sits quietly, who withdraws. Is a gender pattern obvious and is intervention employed?
- ☐ **Risk taking opportunities** and encouragement for girls.
- ☐ **Classroom events and important celebrations.** George Washington helped win the vote for fewer than two million white males, Abraham Lincoln helped win the vote for fewer than one million black males, Susan B. Anthony helped win the vote for 26 million American women. Does your school celebrate Anthony's birthday on February 15th, 1820?
- ☐ **Teacher knowledge of current reports and publications** about the self-esteem of girls and gender equity issues.
- ☐ **Expectations that students will respect the rights of other students.** Are both boys and girls encouraged to take responsibility for their actions?

IT WORKS!

Overcoming Subtle Messages of Sex Inequity

by Gaye Luna

As educators, we all have the responsibility to treat students — male and female — equitably. But recent reports indicate that female students are getting shortchanged by teachers.

It's not just blatantly biased remarks that can offend. Often, behavior we may consider insignificant can cause harm to female students.

These "micro-inequities," which can be anything that causes an individual to be singled out, overlooked, ignored, or otherwise discounted on the basis of unchangeable characteristics such as sex, race, or age, are well documented in research on equity issues.

Problem: 'Invisible' girls

- Encourage girls to ask questions, ask complex and abstract questions of female students, and ask the same kinds of questions to students of both sexes.
- Distribute attention and praise equally among students.
- Encourage female students to explore and experiment and offer instruction on how to do things for themselves; don't do the task for female students or allow them to fail with less instruction.
- Offer opportunities to assist in class on an equal basis, such as taking roll, delivering notes to school offices; collecting papers.
- Do not allow female students to be physically "squeezed out" from viewing a laboratory assignment or a demonstration.

Problem: Different treatment

- Use eye contact to recognize female students who speak up in class; also nod, gesture and use their names.
- Try not to interrupt female students any more than you would male students and do not allow other students to do so.
- Encourage students to respond to comments and questions. If male students focus on each other's points but ignore an appropriate comment offered by a female student, slow the discussion and draw in the comment that has been overlooked.
- Direct disagreement of female students' statements to the substance of the remarks and not their sexuality or perceived social role.
- Do not allow male students to talk more than female students or dominate discussions (encourage taking turns at speaking) and give both female and male students an equal amount of time to respond after asking a question.
- Do not use patronizing, stereotypical language when addressing female students, such as "sweetie" or "little girl."
- Avoid grouping students according to sex, especially in a way that implies female students are not as competent or do not have status equal to male students.

Problem: Fear of math/science

- Encourage female students to enroll in subjects that strengthen their math and science backgrounds, such as technical courses, industrial programs and technology classes. Encourage self-confidence and self-worth in such subjects.
- Share information that demonstrates the importance of math and science in many careers.
- Encourage female students' intellectual ability.
- Avoid disparaging comments that address female students' seriousness and academic commitment such as, "Are you really serious about learning this math theorem?"
- Encourage female students to discover alternative solutions to problems and to be intellectual risk takers.
- Have the same academic standards for all students.

Problem: Perception of goals

- Do not generalize that future marital and parental status will direct or automatically interfere with the career or professional plans of female students.
- Ask female students about their college plans and encourage them to investigate all avenues for future success as college students. Provide career information and other resources.
- Help female students learn about traditionally male fields such as the sciences, law, medicine and technical areas, particularly when these areas reflect a student's interests and abilities.
- Consider being a mentor for female students or help students find role models or mentors in career fields that interest them.

Problem: Biased materials

- Be aware of these types of biased messages: invisibility (underrepresentation), stereotyping, imbalance, selectivity (one-dimensional rather than varied perspectives on issues and events), a glossed-over discussion of controversial issues, separation of issues related to gender and race, and an overuse of masculine terms).

Problem: Communication patterns

- Use the same tone in talking with all students; avoid using a patronizing or impatient tone with female students.
- Avoid using generically masculine language that implicitly excludes women such as the pronoun "he." Try to adopt a nonsexist language policy.
- Do not use classroom examples that reflect stereotypical ideas about female and male social and professional roles, such as "he, the doctor" or "she, the maid."
- Do not allow sexually obscene language, sexually explicit jokes and sexually suggestive comments in your classroom.

Gaye Luna *is professor and chair of the Department of Technology at Northern Arizona University in Flagstaff.*

Vocational Education Journal. Luna, Gaye. "Overcoming Subtle Messages of Sex Equity" March 1993. Copyright 1993 the American Vocational Association. Reprinted by permission.

INSTRUCTIONAL STRATEGIES

KATHIE ANDERSON, RHONDA BROOKS, AND SR. MOLLIE REAVIS, SNJM

As a result of attending the Woodrow Wilson GEMS Congress, we have become more aware of the subtle ways we as teachers unintentionally foster gender inequities. After listening to guest speakers and our peers, watching videotapes, and reading books and articles, we have compiled the following list of instructional strategies to promote learning opportunities for girls. Some of the following strategies are also useful for encouraging minority students and others who may not be active participants.

Teachers are frequently unaware of their own shortcomings; you may wish to videotape your class in order to review your teaching style more objectively. Peer reviews may also be helpful. Because most teachers are innovative and try to meet the needs of all their students, we hope you will find and use some new techniques to make your classroom more equitable for all students.

Awareness

- call on girls as often as you do boys, and be sure to ask the girls some of the higher level cognitive questions (research shows that both male and female teachers initiate more interaction with boys, and on higher cognitive levels).
- have high expectations of both boys and girls; don't over-nurture the girls (over-nurturing encourages dependence rather independence).
- give girls an equal amount of help and feedback (boys usually receive more help and praise which builds self-esteem).
- encourage girls to use manipulatives and to participate in hands-on experiences (without encouragement girls tend to be passive learners).

- balance cooperative and competitive activities (most girls learn more readily in cooperative situations).
- use gender-free language in classroom discourse (avoid the use of male terms for generic concepts, e.g. use synthetic instead of man-made).
- give substantive feedback to girls' as well as boys' answers — not just a nod or an "okay."
- make eye contact with all students and call them by name.
- don't interrupt girls or let other students do so.
- don't stop talking to a girl when a boy approaches.

Classroom Strategies

- mentally divide your room into quadrants. If students in all quadrants don't participate, you can say, "Let's hear from someone in the back right corner."
- ask students to state concepts out loud (this helps students to learn the vocabulary of the subject).
- cultivate bonding around an intellectual challenge (this provides students with an opportunity to feel like a team).
- use the human body as a vehicle for interesting girls in physics, etc. (girls often find the human body fascinating and will identify with phenomena related to the body).
- encourage girls to participate in extracurricular math and science activities.
- stress safety precautions instead of dangers (girls will sometimes be reluctant to participate in lab activities if they seem too dangerous).
- use computer and lab partners (most girls work better in teams).
- introduce lessons with an overview (girls learn more readily from the "big picture" rather than from disconnected details).
- incorporate students' comments into lectures (this technique validates the students' understanding of concepts).

- acknowledge the contributions of both men and women to mathematics and science via posters, reports, examples, story problems, etc.
- use cooperative activities and some single-sex small groups.
- provide female role models.
- provide opportunities for girls to develop spatial visualization skills.
- use writing to help students express and clarify their feelings and thoughts (e.g., math autobiographies, science journals).
- create an attractive classroom environment (research shows that girls learn better in an aesthetically pleasing environment).
- wait 4 or 5 seconds before calling on a student to answer the question (girls often wait until they have formulated an answer before they raise their hands; boys often raise their hands immediately and then formulate an answer).
- don't grade on a curve (encourage all students to realize their potential rather than to compete against one another).
- solve problems by multiple methods (this appeals to students with different learning styles).

Classroom Attitudes

- encourage a "can do" attitude; teach students to give themselves credit. (Girls tend to credit their achievements to luck rather than to their ability.)
- encourage all students to take additional math and science courses (teacher encouragement has been shown to be a major factor in students' decision-making processes).
- encourage girls to take risks.
- judge *what* girls say, not *how* they say it (don't assume that if they hesitate or apologize, they don't know the answer).
- help girl students value themselves (girls often have a severe drop in self esteem during the middle school years. Women teachers need to model a healthy self respect and male teachers need to have respect for both girl students and female colleagues).

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Teaching Strategies

These activities have been adapted from "Selected Activities and Recommendations for Creating a Sex-Fair Classroom" by Suzanne Hurwitz and Susan Schaffer in Myra and David Sadker's *Between Teacher and Student: Overcoming Sex Bias in Classroom Interaction*. Washington, DC: U.S. Department of Education, 1980. The original text has been changed or expanded upon to accommodate the issues, concepts, and language used in this publication.

Overcoming Sex Bias in Active Teaching Attention

- Ask a colleague to observe your classes, using an assessment sheet for determining teacher-student interaction patterns. Better yet, have your classes videotaped or audiotaped. Then, using the assessment sheet, replay the tapes and evaluate your teaching behavior.
- Circulate around the room, positioning yourself in different areas, to influence the degree of involvement of both girls and boys in learning.
- Make a conscious effort to encourage equal participation of all students. Hold both boys and girls accountable to the same standards for participation in classroom discussion.
- Issue both *lower order* and *higher order* questions to girls and boys on an equitable basis.
- Measure the time you wait for replies to your questions in class to ensure an equal distribution for girls and boys.
- Issue equitable verbal and nonverbal reinforcement to both girls and boys.
- Give extended directions to boys and girls on an equitable basis; provide extensive directions so girls and boys can complete tasks independently; and, avoid doing or completing tasks for students.

Overcoming Sex Segregation in Classroom Interaction

- Ask a colleague to observe your classes, using an assessment sheet for determining the sex segregation patterns. Better yet, have your classes videotaped or audiotaped. Then, using the assessment sheet, replay the tapes and evaluate the segregation patterns.
- When seating or lining up pupils, use categories other than gender to divide the class.
- At the elementary level, avoid sex-segregated play areas.
- When students self-segregate in their own activities, it may be necessary to form a new organizational pattern to achieve classroom integration.
- Encourage both sexes to participate in traditional and nontraditional activities.
- If students are uncomfortable with nonstereotyped assignments, discuss the issue of sex stereotyping and today's changing roles for women and men.
- Examine textbooks and other instructional materials for sex-role stereotyping and sexist language.
- Make a conscious effort to assign boys and girls leadership and support roles on an equitable basis both within and outside the classroom (for example, field trips).
- Encourage and reinforce girls and boys who are working and playing cooperatively.

Overcoming Sex Bias in Classroom Discipline

- Ask a colleague to observe your classes, using an assessment sheet for determining the classroom discipline patterns. Better yet, have your classes videotaped or audiotaped. Then, using the assessment sheet, replay the tapes and evaluate classroom discipline patterns.
- Avoid biased expectations, such as stereotyping girls as obedient and complacent and boys as aggressive and disruptive.
- The manner in which reprimands are given should be related to the misbehavior and not applied on the basis of sex.
- Harsh and public discipline is likely to be an ineffective approach for both female and male students.

Reprinted/excerpted with permission from Bitters, Barbara A. and Foxwell, Susan, Wisconsin Model for Sex Equity in Career and Vocational Education. Wisconsin Dept. of Public Instruction, 125 South Webster Street, Madison, WI 53702; (800) 243-8782.

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Teacher Strategies for Achieving Sex Equity

1. Take the issue of equity seriously; it affects the classroom climate and the learning that occurs there.
2. Plan your classroom to portray sex fairness. Use posters and other visuals that show both males and females in traditional and nontraditional roles and that show males and females working together.
3. Check learning activities for sex fairness. Also plan lessons that focus on increasing students' equity awareness, knowledge, and skills.
4. Use inclusionary language in both written and verbal communication. Encourage students to do the same.
5. Direct class discussion to enable all students to participate. Studies have shown that teachers give more attention to male students, calling on them more frequently, asking them higher-order questions, offering them more assistance, and disciplining them more often.
6. Promote cooperation and integration of boys and girls through activities that help students work together more effectively.
7. Help students understand equity issues and the impact these issues have on their lives.
8. Avoid generalizations and sex stereotypes, such as "you drive like a woman."
9. In the classroom, use a variety of examples that portray men and women using a wide range of feelings, interests, skills, and career choices.
10. Encourage both sexes to participate in traditional and nontraditional activities.
11. Examine instructional materials for sex-role stereotyping, sex bias, and sexist language. Discuss and point these out to students.
12. Make a conscious effort to assign boys and girls leadership and support roles on an equitable basis, both within and outside the classroom (for example, on field trips).

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Education Reform Initiatives

When planning staff development activities keep in mind the education reform initiatives and link training and activities to them whenever possible. The following pages offer a description of current legislative initiatives:

Goals 2000 National Education Goals 28b
New Compact for Learning Strategic Objectives 28b
School-to-Work Program Purposes 28b
New York State Learning Standards 28c-d
Career Development and Occupational Skills Standards and Curriculum Framework 28f-g
Gender Equity and the World of Work: A Dynamic Connection to the New York State Learning Standards 28h-n

Goals 2000 National Education Goals

1. All children in America will start school ready to learn.
2. The high school graduation rate will increase to at least 90 percent.
3. All students will leave grades 4, 8, and 12 having demonstrated competency over challenging subject matter including English, Mathematics, science, languages, civics and government, economics, arts history, and geography, and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our Nation's modern economy.
4. The Nation's teaching force will have access to programs for the continued improvement of their professional skills and the opportunity to acquire the knowledge and skills needed to instruct and prepare all American students for the century.
5. United States students will be first in the world in mathematics and science achievement.
6. Every adult American will be literate and will possess the knowledge and skills necessary to compete in global economy and exercise rights and responsibilities of citizenship.
7. Every school in the United States will be free of drugs, violence, and to unauthorized present firearms and alcohol and will offer a disciplined environment conducive to learning
8. Every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children

New Compact For Learning Strategic Objectives

1. All children will come to school ready to learn.
2. All children will read, write, compute, and use the thinking skills they need to continue learning by the time they are in fourth grade or its equivalent.
3. At least 90 percent of all young people will earn a high school diploma by age 21.
4. All high school graduates will be prepared for college, work, or both.
5. All high school graduates will demonstrate proficiency in English and another language, in mathematics, the natural sciences, and technology; in history and other social sciences; and in the arts and other humanities. (standards of proficiency will be developed by the appropriate parties for approval by the Regents.)
6. All students will acquire the skills, knowledge, and attitudes needed for employment and effective citizenship.
7. All children will demonstrate commitment to the core values of our democratic society and knowledge of the history and culture of the major groups which comprise American society and the world.
8. Students of both genders and all socioeconomic-economics and racial/ethnic backgrounds will show similar achievement on State assessment measures

School-To-Work Program Purposes

1. Provide all students opportunities to participate in a performance-based education and training program that prepare them for high skill, high-wage careers.
2. Provide all students opportunities for further education, including a four-year college or university.
3. Help all student attain high academic and occupational standards.
4. Improve the knowledge and skills of youth by integrating academic and occupational learning, integrating school-based and work-based learning, and building effective linkages between secondary and postsecondary education.
5. Motivate all youth to stay in, or return to school or a classroom setting, and to strive to succeed by providing enriched learning experiences and assistance in obtaining good jobs and continuing education.
6. Expose students to a broad array of career opportunities; facilitate the selection of career majors, based on individual interest, goals, strengths, and abilities.
7. Increase opportunities for minority women, and individuals with disabilities enabling them to prepare for careers that are not traditional for their race, gender, or disability
8. Utilize work places as active learning environments in the educational process by making employers joint partners with educators in providing opportunities for all students to participate in high quality work based learning experiences
9. Promote the formation of local partnerships to link the worlds school and work among secondary school and post-secondary educational institutions private and public employers, labor organizations, government, community based organizations, parents, students SEAs, LEAs, training and human service agencies
10. Promote the formation of local partnerships between elementary schools and secondary schools (including middle schools) and local businesses

The Arts

Standard 1: Creating, Performing, and Participating in the Arts
Students will actively engage in the processes that constitute creation and performance in the arts (dance, music, theatre, and visual arts) and participate in various roles in the arts.

Standard 2: Knowing and Using Arts Materials and Resources
Students will be knowledgeable about and make use of the materials and resources available for participation in the arts in various roles.

Standard 3: Responding to and Analyzing Works of Art
Students will respond critically to a variety of works in the arts, connecting the individual work to other works and to other aspects of human endeavor and thought.

Standard 4: Understanding the Cultural Contributions of the Arts
Students will develop an understanding of the personal and cultural forces that shape artistic communication and how the arts in turn shape the diverse cultures of past and present society.

Career Development and Occupational Studies

Standard 1: Career Development
Students will be knowledgeable about the world of work, explore career options, and relate personal skills, aptitudes, and abilities to future career decisions.

Standard 2: Integrated Learning
Students will demonstrate how academic knowledge and skills are applied in the workplace and other settings.

Standard 3a: Universal Foundation Skills
Students will demonstrate mastery of the foundation skills and competencies essential for success in the workplace.

Standard 3b: Career Majors
Students who choose a career major will acquire the career-specific technical knowledge/skills necessary to progress toward gainful employment, career advancement, and success in postsecondary programs.

Social Studies

Standard 1: History of the United States and New York
Students will use a variety of intellectual skills to demonstrate their understanding of major ideas, eras, themes, developments, and turning points in the history of the United States and New York.

Standard 2: World History
Students will use a variety of intellectual skills to demonstrate their understanding of major ideas, eras, themes, developments, and turning points in world history and examine the broad sweep of history from a variety of perspectives.

Standard 3: Geography
Students will use a variety of intellectual skills to demonstrate their understanding of the geography of the interdependent world in which we live—local, national, and global—including the distribution of people, places, and environments over the Earth's surface.

Standard 4: Economics
Students will use a variety of intellectual skills to demonstrate their understanding of how the United States and other societies develop economic systems and associated institutions to allocate scarce resources, how major decision-making units function in the United States and other national economies, and how an economy solves the scarcity problem through market and nonmarket mechanisms.

Standard 5: Civics, Citizenship, and Government
Students will use a variety of intellectual skills to demonstrate their understanding of the necessity for establishing governments; the governmental system of the United States and other nations; the United States Constitution; the basic civic values of American constitutional democracy; and the roles, rights, and responsibilities of citizenship, including avenues of participation.

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Health, Physical Education, and Home Economics

Standard 1: **Personal Health and Fitness**
Students will have the necessary knowledge and skills to establish and maintain physical fitness, participate in physical activity, and maintain personal health.

Standard 2: **A Safe and Healthy Environment**
Students will acquire the knowledge and ability necessary to create and maintain a safe and healthy environment.

Standard 3: **Resource Management**
Students will understand and be able to manage their personal and community resources.

Mathematics, Science, and Technology

Standard 1: **Analysis, Inquiry, and Design**
Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions.

Standard 2: **Information Systems**
Students will access, generate, process, and transfer information using appropriate technologies.

Standard 3: **Mathematics**
Students will understand mathematics and become mathematically confident by communicating and reasoning mathematically, by applying mathematics in real-world settings, and by solving problems through the integrated study of number systems, geometry, algebra, data analysis, probability, and trigonometry.

Standard 4: **Science**
Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.

Standard 5: **Technology**
Students will apply technological knowledge and skills to design, construct, use, and evaluate products and systems to satisfy human and environmental needs.

Standard 6: **Interconnectedness: Common Themes**
Students will understand the relationships and common themes that connect mathematics, science, and technology and apply the themes to these and other areas of learning.

Standard 7: **Interdisciplinary Problem Solving**
Students will apply the knowledge and thinking skills of mathematics, science, and technology to address real-life problems and make informed decisions.

English Language Arts

Standard 1: **Language for Information and Understanding**
Students will listen, speak, read,and write for information and understanding. As listeners and readers, students will collect data, facts, and ideas; discover relationships, concepts, and generalizations; and use knowledge generated from oral, written, and electronically produced texts. As speakers and writers, they will use oral and written language that follows the accepted conventions of the English language to acquire, interpret, apply, and transmit information.

Standard 2: **Language for Literary Response and Expression**
Students will read and listen to oral, written, and electronically produced texts and performances from American and world literature; relate texts and performances to their own lives; and develop an understanding of the diverse social, historical, and cultural dimensions the texts and performances represent. As speakers and writers, students will use oral and written language that follows the accepted conventions of the English language for self-expression and artistic creation.

Standard 3: **Language for Critical Analysis and Evaluation**
Students will listen, speak, read,and write for critical analysis and evaluation. As listeners and readers, students will analyze experiences, ideas, information, and issues presented by others using a variety of established criteria. As speakers and writers, they will use oral and written language that follows the accepted conventions of the English language to present, from a variety of perspectives, their opinions and judgments on experiences, ideas, information and issues.

Standard 4: **Language for Social Interaction**
Students will listen, speak, read,and write for social interaction. Students will use oral and written language that follows the accepted conventions of the English language for effective social communication with a wide variety of people. As readers and listeners, they will use the social communications of others to enrich their understanding of people and their views.

Languages Other Than English

Standard 1: **Communication Skills**
Students will be able to use a language other than English for communication.

Standard 2: **Cultural Understanding**
Students will develop cross-cultural skills and understandings.

Grades K-4

CAREER DEVELOPMENT AND OCCUPATIONAL SKILLS

Standard 1	Standard 2	Standard 3a	Standard 3b
Career Development Students will develop an awareness of the world of work, explore career options, and relate personal skills, aptitudes, and abilities to make future career decisions	**Integrated Learning** Students will demonstrate how academic knowledge and skills are applied in the workplace and other settings	**Universal Foundation Skills** Students will demonstrate mastery of the foundation skills and competencies essential for success in the workplace	**Career Majors** Students who choose a career major will acquire the career specific technical knowledge/skills necessary to progress toward gainful employment, career advancement, and success in postsecondary programs.
School Based • Career Awareness • Speakers • Career Day • Career Fair • Field Trips/Tours • Work Simulation • Explorer Program • Junior Achievement	**School Based** • Integrated Academic/ Vocational Programs • Project Based Learning • Work Simulation • Junior Achievement	**School Based** • Project Based Learning • Technological Training and Application • Work Simulation • Junior Achievement	
	Work Based • Community Service • Entrepreneurial Projects	**Work Based** • Community Service • Entrepreneurial Projects	
Connecting • School Mentoring	**Connecting** • School Mentoring		

Standards and Curriculum Framework developed by Suzanne Meyer for Eastern Monroe County School Business Partnership

Grades 5-8

STANDARDS (CDOS) AND CURRICULUM FRAMEWORK

Standard 1 **Career Development**	**Standard 2** **Integrated Learning**	**Standard 3a** **Universal Foundation Skills**	**Standard 3b** **Career Majors**
Students will develop an awareness of the world of work, explore career options, and relate personal skills, aptitudes, and abilities to make future career decisions.	Students will demonstrate how academic knowledge and skills are applied in the workplace and other settings	Students will demonstrate mastery of the foundation skills and competencies essential for success in the workplace	Students who choose a career major will acquire the career specific technical knowledge/skills necessary to progress toward gainful employment, career advancement, and success in postsecondary programs.
School Based • Career Awareness • Speakers • Career Day • Career Fair • Field Trips/Tours • Work Simulation • Explorer Program • Junior Achievement	**School Based** • Career Major Cluster • Integrated Academic/Vocational Programs • Project Based Learning • Work Simulation • Junior Achievement	**School Based** • Project Based Learning • Technological Training and Application • Work Simulation • Junior Achievement	
	Work Based • Community Service • Entrepreneurial Projects	**Work Based** • Community Service • Entrepreneurial Projects	
Connecting • School Mentoring • Pre-Employment Program • Career Action Plan • Transition Counseling • Workplace Mentoring • Workforce Preparation • Job Shadowing	**Connecting** • School Mentoring • Transition Counseling	**Connecting** • School Mentoring • Pre-employment Program • Transition Counseling • Workforce Preparation	

For more information, contact Kathy Heffron (716) 383-2257, or e-mail kathy_heffron@ccmail.monroe.edu

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Grades 9-12

Standard 1

Career Development

Students will develop an awareness of the world of work, explore career options, and relate personal skills, aptitudes, and abilities to make future career decisions.

School Based

- Career Awareness
- Speakers
- Career Day
- Career Fair
- Field Trips/Tours
- Work Simulation
- Explorer Program
- Junior Achievement

Work Based

- Community Service
- Entrepreneurial Projects
- Job Shadowing

Connecting

- School Mentoring
- Pre-Employment Program
- Career Action Plan
- Transition Counseling
- Workplace Mentoring
- Workforce Preparation
- Job Shadowing

Standard 2

Integrated Learning

Students will demonstrate how academic knowledge and skills are applied in the workplace and other settings.

School Based

- Career Major Cluster
- Integrated Academic/ Vocational Programs
- Project Based Learning
- Work Simulation
- Junior Achievement

Work Based

- Community Service
- Entrepreneurial Projects
- Youth Apprenticeship
- Independent Work Experience

Connecting

- School Mentoring
- Transition Counseling

Standard 3a

Universal Foundation Skills

Students will demonstrate mastery of the foundation skills and competencies essential for success in the workplace.

School Based

- Project Based Learning
- Technological Training and Application
- Work Simulation
- Junior Achievement

Work Based

- Community Service
- Entrepreneurial Projects
- Co-op Work Study
- Exploratory
- Independent Work Experience
- Tech Prep

Connecting

- School Mentoring
- Pre-employment Program
- Transition Counseling
- Workforce Preparation
- Tech Prep

Standard 3b

Career Majors

Students who choose a career major will acquire the career specific technical knowledge/ skills necessary to progress toward gainful employment, career advancement, and success in postsecondary programs.

School Based

- Career Major Cluster
- Workplace as Classroom
- Technological Training and Application
- Vocational Program
- Junior Achievement

Work Based

- Entrepreneurial Projects
- Co-op Work Study
- Junior Achievement
- Independent Work Experience
- Tech Prep

Connecting

- Career Action Plan
- Job Placement
- Tech Prep

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Gender Equity and the World of Work: A Dynamic Connection to the New York State Learning Standards

Prevailing Themes/Issues Throughout All Learning Standard Areas

Gender Equity

- Male/Female Interaction
- Stereotyping of Women
- Treatment of Women (in/out of the classroom)
- Societal Norms/Expectations
- Cultural Differences Between Groups
- Gender Gaps in the Classroom

Relationship to ELA (English, Language Arts) Standards

ELA 1 = Students will read, write, listen and speak for information/understanding.

Students will:

- Collect data, facts, ideas
- Discover relationships and concepts
- Use oral and written language to acquire, interpret, apply and transmit information

Gender Equity Issues:

- Male/ Female Interaction
- Stereotyping of Women
- Treatment in/out of Classroom
- Confidence Builder

Career Awareness Issues:

- Male/Female Interaction
- Awareness of Career Opportunities
- Confidence Issues

ELA 4 = Students will read, write, listen and speak for social interaction.

Gender Equity Issues
- -Cultural Difference in Gender "Equity"
- -Societal norms or expectations

Career Awareness Issues
- -Opportunities Within/ Between Cultures
- -Cultural Bias in Employment (pay, advancement)

Relationship to CDOS (Career Development and Occupational Studies) Standards

CDOS 1 = Be knowledgeable about the world of work, explore career options and relate personal skills, aptitudes and attributes to future career decisions.

Gender Equity Issues
- -Equal Treatment
- -Social Bias
- -Interaction between men and women
- -Stereotyping

Career Awareness Issues
- -Male/Female Interactions
- -Confidence Issues
- -Bias in Employment (jobs, pay, advancement, type of work)

Relationship to MST (Mathematics, Science, Technology) Standards

MST 1 = Analysis, Inquiry and Design

Students will:

- -Use mathematical analysis
- -Use scientific inquiry
- -Use engineering design
- -Pose questions, seek answers and develop solutions

Gender Equity Issues:

- -Women taking advanced courses
- -Societal expectations regarding "Traditional" Careers
- -Confidence Building

Career Awareness Issues

- -Women in MST fields of employment
- -Gender Bias in MST Careers
- -Confidence Issues

MST 3 = Understand mathematics and become mathematically confident by communicating and reasoning mathematically by applying mathematics in real work settings.

Gender Equity Issues:
- Women Taking Advanced Math Courses
- Confidence building
- Societal Norms/Expectations Regarding "Traditional" Careers for Women

Career Awareness Issues
- Career Opportunities in Math-Intensive Fields (e.g., engineering)
- Gender Bias in Math-Intensive Career Fields

- Women make up 53% of the US population, but comprise less than 8% of our scientists and engineers!

What Should We Do?

- Promote and emphasize career opportunities

- Help break down stereotypes
  Feature accomplishments of historical/present day women and minorities

- Promote a "Math For All" and "Science For All" attitude in your classroom

- Interact with your female students the way you do with your male students (Questions/Encouragement/Help)

- Do NOT lower expectations or requirements for female students

- Get rid of the "Science Insider' or " Math Insider" mind set

Developed by Michael Smith. Marion Junior/Senior High School. Marion. NY 14505 (315-926-4228) for the Finger Lakes Tech Prep Middle School Career Development Cadre

Staff Development Offerings from Career Options Institute

Career Challenge Training Institute

The following staff development models are examples of the kind of training developed by the Career Options Institute for New York State educators.

Career Challenge is a counseling program for re-entry women adapted from the adventure-based counseling model developed by Project Adventure, Inc. With an emphasis on personal risk taking and goal setting, this model addresses the needs of women preparing for nontraditional technical and trade occupations.

The **Career Challenge Advanced Leadership Skills Institute** is a six-day, residential training session designed for counselors and other program staff who have group facilitation and counseling responsibilities. An experiential participant-observer model of training is utilized throughout the session to prepare participants to conduct the **Career Challenge Intensive Workshop**.

The first day of the training is reserved for introductions and discussion of the model and training format. The next five days are devoted to "living the model" or experiencing all aspects of this intensive workshop. During this experiential process, we integrate our perspectives as participants as well as professionals or "observers" of the process. The tool for accomplishing this is the "debriefing" that follows each activity.

For more information about the Career Challenge Training Institute or the Women and Leadership Retreat, call the Career Options Institute at 518-786-3236.

Participants have the opportunity to practice the Adventure Counseling skills necessary to facilitate a **Career Challenge Intensive Workshop**: sequencing curriculum; briefing and framing activities; leadership and facilitation of group process; debriefing activities; group closure. Activities and initiatives are conducted outside on the grounds of Renselaerville Institute and require a moderate amount of physical activity . Day four consists of a full ropes course program, including high and low elements. The schedule is full, with both daytime and evening sessions.

Women and Leadership Retreat

Here is an opportunity to pull back from the hectic pace of our professional schedules to participate in a unique **Women and Leadership Retreat**. In the supportive environment of the Rensselaerville Institute, this small gathering of women will share, debate and draw conclusions about many of the issues surrounding the role of women as leaders in our culture.

Discussion will incorporate both professional and personal perspectives, with each participant encouraged to draw from her own experiences. Opportunities for identifying personal leadership styles will be provided through a series of group problem solving activities. Selected readings will be provided in advance of the retreat.

Adventures in Career Guidance

For more information about Adventures in Career Guidance call 518-786-3236.

Adventures in Career Guidance is offered for middle and high school counselors and teachers. Interactive sessions present interdisciplinary activities for the classroom to assist counselor-teacher collaboration in the area of career guidance. On-site workshops may be arranged.

Current research has focused on the loss of confidence and self-esteem of adolescents, particularly females, during the middle and high school years. At the same time, however, emphasis on early career planning has increased the pressure on these students to make important decisions at this vulnerable period in their lives.

This model uses an adventure-based approach to career decision-making to help students develop the confidence and skills they need to explore a variety of options. Opportunities for personal goal setting and challenges are woven into the career development tasks of information gathering, interviewing, and public speaking. Learning about careers becomes an adventure, encouraging students to take chances and explore new ideas.

"Achieving Equity in Education" Graduate Course

For more information about "Achieving Equity in Education" Graduate Course, call 518-786-3236.

The **NYS Career Options Institute** co-sponsors with the College of St. Rose a **tuition free**, four credit, two semester graduate course for NYS educators. Course participants learn to plan, implement and evaluate a variety of activities aimed at equitable curriculum, instruction, and guidance. In that process they have the opportunity to develop skills as advocates for full participation of girls and women in technological and higher wage careers. Team strategies for working within local districts give participants a foundation for **increasing career options** for their students.

Entitled "Achieving Equity in Education", the course if offered in two locations each year. Recruitment takes place in May and June.

The Career Options Institute is located at:

6 British American Boulevard, Suite G
Latham, NY 12110
Telephone: 518-786-3236
FAX: 518-786-3245

All services and resources are FREE to New York State Educators.

Out of Bounds:
Experiential Career Development for Students

Out of Bounds is an experiential program that integrates adventure-based activities into a curriculum of career development for middle school students. Many of the adventure-based activities have been adapted from Project Adventure's *Adventure in the Classroom* model. Out of Bounds challenges students to examine with fresh eyes and open minds a variety of career paths. Individual skills and interests are identified and affirmed through a process of problem solving and discovery

In an Out of Bounds program students experience

1. Increased personal confidence in problem solving and decision-making
2. Teamwork and support for each other in group settings
3. Hands-on physical and intellectual learning challenges
4. Diverse learning enviroments including nature and workplace simulations
5. A sense of their importance as group members and leaders
6. Feedback and motivation to develop technical and interpersonal skills

Out of Bounds activities include

1. A sense of adventure and drama
2. Challenging, attractive goals
3. Teachable and learnable moments
4. Clear limits and expectations
5. Problem solving that requires group effort and relationship-building, rather than individual success or competition
6. Connections to skills and information needed in real life
7. Moments of active involvement, combined with moments of personal and group reflection

The learning atmosphere in an Out of Bounds activity encourages

1. Cooperation, encouragement and concern for individuals
2. Enjoyment, fun and the opportunity to laugh
3. A learning environment which is engaging, unfamiliar and unpredictable
4. Intellectual, social, physical and emotional learning and development
5. Confidence in each students' intelligence and acknowledgement of positive accomplishments
6. A long-range perspective through which students see their lives and the activity in relation to the past and the future

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Staff Development for Out of Bounds

An Experiential Career Development Program

"Life is either an adventure or it's nothing."
- Helen Keller

Out of Bounds Staff Development Training, conducted by the NYS Career Options Institute (COI), introduces educators to experiential approaches for career development. Such approaches feature both classroom and career counseling activities. They can be used to address skills and competencies including:

- NYS Learning Standards for CDOS (Career Development and Occupational Studies),
- SCANS Skills, and
- skill standards integrated throughout each academic and personal discipline.

Educators can use Out of Bounds activities to help students achieve essential skills and confidence. The curriculum integrates the cooperative and risk-taking approaches developed by Project Adventure, Inc. with such career development activities as information gathering, problem-solving, decision-making, and communication. Career development becomes an adventure where students examine new ideas and set new goals. The program is particularly valuable in teaching students to work together, to take charge of their choices, and to make viable and nontraditional decisions.

About the Training

COI uses a participant/facilitator teaching style. Through actual participation in each activity, educators explore different learning styles, group roles, and approaches to problem-solving. They work together to meet group goals. Following each activity, participants reflect on the activity as future facilitators, discussing how the activity could be integrated with their own curriculum and subject areas.

Out of Bounds involves some light physical activity. All facets of participation in sessions are guided by the concept of "challenge by choice," meaning that group members can determine challenging but physically acceptable levels of participation. Out of Bounds training can be moved outdoors; please dress comfortably.

About the Career Options Institute

COI developed the Out of Bounds program in 1991. Since then, the program has been tested and refined in classrooms, worksites and teacher training sessions. COI may be contacted at (518) 786-3249 to arrange for training. Also, several Tech Prep Middle School Career Development Cadres offer Out of Bounds training in New York State, and may be contacted through COI.

	5	6	7	8	9	

Language Arts	
Math/Science/Tech	
Social Studies	
The Arts	
Health/P.E./H.Eco.	
Interdisciplinary	✓

Self knowledge	
Value of Work	
Career Information	
Career Planning & Decision Making	
Changing Nature of Work	

School & Work	
Applied Learning	

Basic (3 R's)	
(Critical) Thinking	✓
Personal	✓
Managing Resources	✓
Managing Information	
Interpersonal	✓
Systems	✓
Technology	

Sample "Out of Bounds" Activity

BALLOON TROLLEYS

De-Inhibitizer; Communication

Materials:

Balloons

Set Up:

Blow up enough balloons so that you have one to fit between every person standing in a single file line. For example, if X is a person and O is a balloon, the line would look like this: XOXOXOXOXOXOX.

Instructions:

"The challenge is to move the entire group across an area, without allowing any of the balloons to hit the floor."

Rules:

A balloon touching the floor or ground may result in:

1. The entire group having to start again;
2. The two people who dropped the balloon having to go to the front of the line and replace the balloon.
3. The group having to figure out a method to pick up the balloon and re-insert it where it was without losing any other balloons;
4. All of the above.

Hint:

Include obstacles in the space for the group to negotiate. They don't have to be elaborate, but you might consider: stepping through a large hoola hoop, stepping over a small barrier, etc.

Source: **New York State Career Options Institute**

	5	6	7	8	9	

Language Arts	✓
Math/Science/Tech	
Social Studies	✓
The Arts	
Health/P.E./H.Eco.	
Interdisciplinary	✓

Self knowledge	✓
Value of Work	
Career Information	
Career Planning & Decision Making	
Changing Nature of Work	✓

School & Work	
Applied Learning	✓

Basic (3 R's)	✓
(Critical) Thinking	✓
Personal	✓
Managing Resources	
Managing Information	✓
Interpersonal	✓
Systems	✓
Technology	

Sample "Out of Bounds" Activity

CAST YOUR VOTE

Trust; Communication

Materials: Masking Tape

Teacher Information:

Great for values clarification and discussion about sensitive issues. Allows older children to safely express opinions.

Use tape to make a line on the floor, representing a continuum from "Strongly Agree" to "Strongly Disagree". Introduce topics and let the students vote by where they stand-- no talking initially. When SA/SD topics have all been introduced, discuss.

Sample Topic:

Begin with: "I think it is (un)fair that . . ."

- Dave is not being hired as a legal secretary because all the other employees he works with are women.
- Even though John had more training, experience, and skills, Mary was promoted to head nurse.
- Melissa has a history of safe driving but was denied a job as a Greyhound bus driver.
- When Brian and Melanie, both fourth graders, were caught cheating on a test, Paul was spanked and Ann was sent to sit in the library.
- Keith and Kathleen were both cooks at the Ritz Hotel, but Keith has been promoted to chef because people think men make better chefs than women.

Source: New York State Career Options Institute

	5	6	7	8	9	

Language Arts	
Math/Science/Tech	
Social Studies	
The Arts	
Health/P.E./H.Eco.	
Interdisciplinary	✓

Self knowledge	
Value of Work	
Career Information	✓
Career Planning & Decision Making	
Changing Nature of Work	

School & Work	
Applied Learning	

Basic (3 R's)	
(Critical) Thinking	
Personal	✓
Managing Resources	
Managing Information	✓
Interpersonal	✓
Systems	
Technology	

SPEEDY DELIVERY

De-inhibitizer; Communication

Materials: None

Teacher Information:

This is a career-focused adaptation of the Project Adventure "Speed Rabbit" game.

Creating Pantomimes: To begin, ask groups of three to work together to create a quick, sequenced pantomime of a career. For example, a group of three can "play" a **Road Construction Worker** as follows:

1. **Center person** pretends to be operating a jackhammer -- extending their arms forward, closing fists and jumping up and down

2 & 3. **Persons to the right and left of center** pretend to be shoveling, throwing gravel over their right shoulders. (2 & 3 always perform the same action)

Pass out different job titles and descriptions to get groups started.

The Game: Ask students to demonstrate their career pantomimes. Pick a few (3) for Round #1. Give everybody a chance to practice the pantomimes chosen. **For example, let's say we've chosen career pantomimes for a (1) Doctor; (2) Chemist; and (3) Mechanic.**

Ask group to form a circle. One volunteer stands in the center of the circle. The center volunteer points to someone standing in the circle and says the name of **one** of the careers (i.e., choosing Doctor, Chemist or Mechanic). The person pointed to and the two people to her/his immediate right and left must now perform the pantomime sequence of the career before the center person can finish saying **"Bumpity-Bump-Bump-Bump!"**

If the trio does not perform the sequence correctly or in time, the person pointed to must take his/her place in the center of the circle. If the trio performs the pantomime sequence correctly and on time, then the center volunteer continues to point to others until someone eventually screws up.

Source: New York State Career Options Institute

	5	6	7	8	9	

Language Arts	
Math/Science/Tech	
Social Studies	✓
The Arts	
Health/P.E./H. Eco.	
Interdisciplinary	✓

Self knowledge	✓
Value of Work	✓
Career Information	✓
Career Planning & Decision Making	
Changing Nature of Work	✓

School & Work	✓
Applied Learning	✓

Basic (3 R's)	✓
(Critical) Thinking	✓
Personal	✓
Managing Resources	✓
Managing Information	✓
Interpersonal	✓
Systems	✓
Technology	

Sample "Out of Bounds" Activity

STARTING OVER

Communication; Decision-making & Problem-Solving; Social Responsibility

Materials:

Paper & pens

Teacher Instructions:

"You are presently living in a developed society on an island that is over-populated and resource scare. It is necessary for you to set up a new colony on a neighboring uninhabited island. As members of a premier economic development consulting firm, the President has appointed your group to recommend 8 occupations that you feel are essential to set up this new colony."

Two limitations to your group's authority have been imposed:

(1) You are limited by government contract to choose the 8 occupations from the list below;

(2) You will need to report, before you start, whether your group will use majority rule or consensus to arrive at each decision.

Your group will be asked to have a clear rationale for each occupational choice.

Choose 8 from:

Carpenter
Doctor
Plumber
Teacher
Electrician
Clergy
Accountant
Lawyer
Architect
Engineer
Farmer
Veterinarian
Entrepreneur
Computer Programmer
Politician
Law enforcement officer

Source: **New York State Career Options Institute**

Gender/Ethnic Expectations and Student Achievement (GESA)

The following summary and program description is by Dolores A. Grayson and Mary D. Martin. Additional information may be obtained by contacting Dolores A. Grayson at the GrayMill Foundation, 2029 352nd Place, Earlham, IA 50072; (515) 834-2431.

Objectives: GESA teachers will reduce disparity in teacher/student interaction as measured by classroom observations. Students in GESA classrooms will achieve significantly higher average gains in reading and mathematics as measured by pre- and post-achievement scores.

Why GESA? Although overt stereotyping is not as common as it was 20 years ago, subtler bias persists, hurting both males and females. The way teachers treat students reflects this bias. GESA examines five areas of disparity in the classroom and then encourages teachers to utilize research-based instructional strategies and resources to eliminate the disparities.

The GESA program is based on the premise that to ensure quality and excellence on an equitable basis, school districts need to address the issue of gender and ethnic bias directly in teachers' interactions with students. Once teachers have examined their own biases, as demonstrated by their own behavior toward male and female students, necessary curricular and other changes can be accepted more easily.

How Does GESA Work? School districts choose potential GESA facilitators to attend a three-day workshop given by GESA staff. Each facilitator then works with 20 to 36 teachers, who attend five monthly workshops. The teachers work in groups of four. After each workshop, teachers in each group observe in one another's classrooms, coding (by gender and ethnicity) the teacher-student interactions studied at the workshop. Each workshop also provides the teachers with resources to address specific curriculum issues in their classrooms.

Is GESA Successful? Yes! Pre- and post-observation and monthly summaries of coding sheets indicate that teachers participating in GESA have reduced disparities in their interactions with all students.

The GESA program is a culmination of eight years of collecting and comparing data and effective strategies.

Correct address: 31630 Railroad Canyon Rd., #10, Canyon Lake, CA 92587, (909) 246-2106.

The Sadker Model

The sex equity training programs designed by David and the late Myra Sadker, well-known sex equity consultants, are researched-based, practical approaches that go to the heart of the educational process - teacher-student interaction. The focus is on actual behavior and on changing what actually happens in the classroom.

The Sadkers designed a three-day workshop connecting classroom research and specific teaching skills. Each workshop participant teaches a brief micro-teaching class to four vocational high school students, questioning and talking with all students fairly, and offering precise, effective feedback to each student response. Then teachers receive feedback from their peers and from the Sadkers on gender balance and the effectiveness of techniques.

Two to four weeks later, all participants reconvene for the third training day which focuses on student reactions to the changed teaching techniques. Teachers said students were better prepared and more attentive because they were expected to answer questions.

Other workshops which range in length are offered. For information call David Sadker at (202) 885-3728.

Adapted from "Kentucky Adopts the Sadker Model" by Bettie Tipton and Marsha Robertson.

Stages of Change

Adapted from "Planning for Change" in *Implementing Title IX and Attaining Sex Equity: A Workshop Package for Elementary-Secondary Educators* by the United States Department of Health, Education, and Welfare, Office of Education. Washington, DC: Government Printing Office, 1978, pp. 24-25.

The purpose of the following is to provide an understanding of the stages many people experience as they work through the change process. It is important that persons working for change anticipate these reactions and be prepared to cope with expected behavior.

Shock or Surprise

Our first reactions to new information or to circumstances necessitating change is shock or surprise. We tend to react strongly to any significant challenge to our perceptions and understandings. Comments that might be heard when people are at this initial stage process include:

"What! Discrimination in our school?"

"What do you mean, I discriminate against females/males in my classroom?"

"Title IX? What are you talking about?"

Disbelief

Shock or surprise soon gives way to active disbelief. We tend to resist information that requires us to re-examine or modify our perceptions of ourselves and the world around us. Comments frequently heard at this stage of change include:

"There's no discrimination in our school!"

"I treat every student exactly alike."

"We've already completed those Title IX requirements!"

Guilt

When we receive new information we may feel inadequate or guilty about its content or simply the fact that we did not know about the new information. Thoughts that may pass through our minds at this stage include:

"I should have realized that our school really does discriminate against students on the basis of sex!"

"I had no idea what I was doing when I separated boys and girls for reading and math classes."

"Why didn't I know about this Title IX?"

Projection

None of us can live with a great deal of guilt about our behavior or our lack of awareness because it is too painful to our image of ourselves. Instead, we often develop defensive ways of getting rid of the guilt and feeling better about ourselves. We often project our guilt onto other persons or other circumstances, blaming others for the problems or the situations in which we find ourselves. It is particularly easy to move into a stage of projection and to blame others when we have acquired enough new information and skills to realize that there is a problem, but not enough to enable us to solve the problem. Comments that may be heard at this stage of change include:

"The administrators have no awareness of sexism; they'll never move!"

"Parents in our community are so traditional. They'll never accept coed physical education classes."

"We wouldn't have to deal with Title IX if it hadn't been for those crazy women!"

Intellectualization

The first four stages of change reflect the ways that we deal with our feelings about new information or change. When we have had the opportunity to deal with these feelings, we begin to 'think' about the matter and attempt to consider the information in a more rational, less affective way. We may begin to assess the possibility of personal and institutional sex discrimination and proceed to an open effort to collect data and to evaluate the information obtained. It is at this stage of change that real problem solving can begin. Comments heard at this stage might include:

> "You know, I realize that I do tend to expect the boys in my class to be better in mathematics than the girls."

> "Title IX implementation will require considerable effort from everyone in the system, but it is worth it if we can improve the quality of the educational services that we can provide."

Integration and Action

The sixth stage of change is perhaps the most difficult and the most important. Integration involves taking the actions necessary to identify the implications of the new information for our daily lives. During this stage of learning or change it is essential that we determine the specific implications of the new information—the action requirements or objectives for our personal or institutional growth. It is at this stage that we must also identify the knowledge and skills that we will need to accomplish these action objectives. Comments that might be heard during this stage of change include:

> "The task force on physical education and athletics is working to design the total physical education curriculum to ensure an adequate variety of activities is provided to meet the needs of all students—males and females."

> "One of my goals as an administrator is to analyze the decisions I make regarding the hiring and promotion of staff to make certain that my unconscious bias does not influence these decisions."

> "Our Title IX implementation plans are well under way. Four task forces are planning various remedial action projects to ensure that we're meeting Title IX requirements."

Acceptance

The final stage of change is achieved when the new information acquired becomes so integrated with our behavior that it seems as if it has always been a part of our perceptions and understandings. At this point our behavior has been thoroughly modified as a result of the new information or insight. Comments that may be heard at this point include:

> "We've worked steadily to reduce sexism in our educational programs and have made progress."

> "The skills I've learned to combat bias in textbooks have improved all aspects of my teaching."

> "Title IX has been an important motivation for improving our education programs and our relationships with the community."

Conclusions

This formulation of change suggests that people working for the implementation of Title IX and sex equity should observe the following guidelines for change:

- Remember that change and learning take time. Do not expect people to accept new ideas immediately.
- Anticipate that first reactions to change are likely to reflect emotions or feelings. Dealing with the affective impact of new information is often necessary before we can begin creative and rational problem solving.
- We should anticipate both our own reactions and the reactions of others as we move through the stages of change; we should not make inflexible judgments as to our own or others' ultimate reactions.

Reprinted/excerpted with permission from Bitters, Barbara A. and Foxwell, Susan, Wisconsin Model for Sex Equity in Career and Vocational Education, Wisconsin Dept. of Public Instruction, 125 South Webster Street, Madison, WI 53702; (800) 243-8782.

Sample Staff Development Activity

Facilities Checklist for Inservices

Event: ______________________________

Date: ____________ Location: ________________ Time: __________

Person in charge: ____________________ No. of participants: __________

Have You Checked the Following?

	No	Yes	Not Applicable
Facilities			
1. large meeting rooms and small breakout rooms	☐	☐	☐
2. room setup arrangements	☐	☐	☐
3. tables for registration and display	☐	☐	☐
4. soundproofing of rooms	☐	☐	☐
5. location of rest rooms	☐	☐	☐
6. parking	☐	☐	☐
7. other ____________	☐	☐	☐
Audiovisual equipment (include time equipment will be used and where it should be set up)			
1. public address system	☐	☐	☐
2. flip chart stands	☐	☐	☐
3. overhead projector, spare bulb, and screen	☐	☐	☐
4. film projector, spare bulb, and screen	☐	☐	☐
5. chalkboards	☐	☐	☐
6. tape recorder	☐	☐	☐
7. extension cords and three-prong plugs	☐	☐	☐
8. other ____________	☐	☐	☐
Supplies			
1. newsprint	☐	☐	☐
2. felt-tipped markers	☐	☐	☐
3. tape	☐	☐	☐
4. pencils and pens	☐	☐	☐
5. grease pencils and blank acetate	☐	☐	☐
6. chalk and erasers	☐	☐	☐
7. note pads	☐	☐	☐
8. name tags	☐	☐	☐
9. preregistration lists	☐	☐	☐
10. signs indicating workshop location	☐	☐	☐
11. participant materials such as the agenda, work sheets, handouts, and so forth	☐	☐	☐
12. other ____________	☐	☐	☐
Refreshments			
1. items to be served	☐	☐	☐
2. time and location	☐	☐	☐
3. other ____________	☐	☐	☐
Arrangements for consultants			
1. travel	☐	☐	☐
2. hotel	☐	☐	☐
3. other ____________	☐	☐	☐

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ACTIVITIES AND TOOLS

The following tools and activities can be used individually or in small groups to help provide awareness for sex equity with a school staff or students. Each item targets specific areas and can be used alone or all activities could be tied together for an ongoing staff development program.

1. **New Frontiers Startling Statements** Appendix 1
   These ten statements could be used with secondary classes or with a faculty group to begin an awareness to the changing workforce and to test the audiences' knowledge of how it is changing. This exercise should stimulate discussion and be a good starting point for pointing out the need for gender equity in classes.

2. **Attitudes Toward Nontraditional Careers** Appendix 2
   This scale is designed to be used with students, faculty or parents to explore attitudes regarding three areas--women and work; nontraditional careers for women; and nontraditional careers for men. There are no right or wrong answers, but should create an awareness of attitudes held by the participants. After completing the scale, the audience might divide into small groups and discuss the ideas generated by this scale. Then each group can report out any new ideas or debates raised by the scale.

3. **What Do You Know About Women in the Workforce?** Appendix 3
   This activity should continue the awareness of a classroom, faculty or parent group of the need for gender equity in the workforce. By completing this exercise, the group can begin to discuss how this information effects their practices and what changes will be needed as a result. Groups can begin to create plans for changing the school environment.

4. **Sex-Role Attitude Inventory** Appendix 4
   This attitude inventory can be an additional tool for staff development with a school group or a classroom to stimulate discussion and continue to help the audience understand their own feelings about sex-roles. From the completion of this inventory, small groups can be formed to discuss the basis for decisions on each item and how it impacts the school curriculum.

5. **Current Behavior Practices Questionnaire** Appendix 5
   This questionnaire is designed for teachers and administrators to analyze their practices related to gender equity. After completion of this questionnaire, the staff can discuss in small groups the necessary next steps this implies for their school and staff.

6. **Knowledge of Legal Equity Quiz** Appendix 6
   This activity would be particularly helpful to all educators, but particularly to counselors and administrators. It might be the needed stimulus for change of policies and practices being used by a school or district. Although this activity is not submitted as a conclusive document due to the changing nature of legal cases, it is a review of procedures upheld by the law regarding gender equity.

Source: Administrator's Guide to Bias Free Classrooms, CETA, 1993, Appendix 1-6 follow.

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NEW FRONTIERS STARTLING STATEMENTS

Choose the correct letter for each of the following statements.

1. ______________ percent of American women, ages 20 and over, work in the labor force.

   A. 63 percent B. 53 percent C. 43 percent

2. ______________ percent of American men, ages 20 and over, work in the labor force.

   A. 87 percent B. 78 percent C. 68 percent

3. A high school female can today expect to spend an average of ______ years working for pay.

   A. 10 B. 22 C. 34

4. _____ out of 10 high school females can expect to be employed for some time.

   A. 1 B. 4 C. 9

5. The average teenage male can expect to spend an average of ____ years working for pay.

   A. 32 B. 38 C. 43

6. ______million families are headed by women who are widowed, separated, divorced or never married.

   A. 31 B. 6 C. 10

7. The traditional concept of the American family is a father who is wage-earner and a mother who remains at home caring for two children. ______ of families conform to tradition.

   A. less than 10 percent
   B. about 25 percent
   C. about 35 percent

8. Woman are concentrated in ___________ occupations.

   A. Clerical
   B. Machine operatives
   C. Professional and technical

9. Men are concentrated in _________________occupations.

   A. Administrative and management
   B. Professional and technical
   C. Craft and craft-related

10. _____ percent of all families are maintained solely by women.
   A. 10 B. 16 C. 23

NEW FRONTIERS STARTLING STATEMENTS

ANSWERS

1. A. 63 percent
2. A. 87 percent
3. C. 34
4. C. 9
5. B. 38
6. B. 6
7. A. Less than 10 percent
8. A. Clerical
9. C. Craft and craft-related
10. B. 16

Appendix 2

ATTITUDES TOWARD NONTRADITIONAL CAREERS

Scoring

The scoring to be used with the scale is an averaging procedure. In order to establish a numerical base, each of the five rating positions (SA,A, N, D, SD) should be assigned a number starting at the left by assigning the number "1" to Strongly Agree" and ending on the right by assigning the number"5" to "Strongly Disagree". The scores for each statement are then averaged. For example, if there are ten people participating, add the ten ratings for the first statement and then divide the total by ten. Continue this procedure for each statement. It is important to note that the numbers obtained as a result of the averaging process have no value, but only serve to identify a position on the scale.

Please answer the following questions based on your personal feelings about each of the ideas. There are no correct answers. Answer by circling the response which most closely represents your feelings using the following guide: SA = Strongly Agree; A = Agree; N = Neutral; D = Disagree; SD = Strongly Disagree

1. Full-time, outdoor jobs are unsuitable for females. SA A N D SD
2. Most women would marry a man even though he works as a secretary/clerk. SA A N D SD
3. Women who have paid jobs are unhappy. SA A N D SD
4. Truck driving is an appropriate career for females. SA A N D SD
5. Men are not patient enough to work with small children in nursery school. SA A N D SD
6. Boys interested in being a hair stylist are effeminate. SA A N D SD
7. A woman can have a career while raising a family. SA A N D SD
8. Money is the only reason that adult women work outside the home. SA A N D SD
9. Physically, women are not capable of working as fire fighters. SA A N D SD
10. A woman can be a good mother while working full-time as a stockbroker. SA A N D SD
11. Women are becoming too independent today. SA A N D SD
12. Most boys do not have the finger coordination to be a typist. SA A N D SD
13. Generally, females perform best at jobs where they are working with people. SA A N D SD
14. High school girls should be encouraged to enroll in traditionally all-male vocational courses like air-conditioning repair. SA A N D SD
15. A man can be a good father while working full-time as a nurse. SA A N D SD
16. Boys should be encouraged to plan professional careers which require more than four years of college. SA A N D SD
17. A man is avoiding his responsibilities when he is at home full-time. SA A N D SD

18. Women are smart enough to become engineers. SA A N D SD

19. All adult women should be prepared to support themselves financially. SA A N D SD

20. Most women who work in machine shops are unfeminine. SA A N D SD

21. Ballet dancing is an appropriate career goal for boys. SA A N D SD

22. Men are better bosses than women. SA A N D SD

23. Teaching woodworking is a suitable career for women. SA A N D SD

24. Women who choose to join the labor force can also be competent mothers. SA A N D SD

25. Women can be effective business managers. SA A N D SD

Appendix 3

WHAT DO YOU KNOW ABOUT WOMEN IN THE WORK FORCE?

Is your awareness of women in the work force increasing? Here are some questions to test your knowledge. Circle the answer that you think is correct.

1. In 1989, the percentage of all women, ages 18 to 64, who were in the labor force.

   a. 50% b. 60% c. 45% d. 69%

2. In this age group, 76% of the women are working.

   a. 35-44 b. 45-54 c. 25-34 d. 16-24

3. Although most women workers are employed full-time, what percentage of all part-time workers are women?

   a. 45% b. 68% c. 75% d. 50%

4. The average woman worker of 16 years of age between 1970-80 could expect to spend how many years of her life in the work force?

   a. 20.2 b. 24.5 c. 29.3 d. 32.5

5. Among black workers, what percentage are women?

   a. 35% b. 42% c. 30% d. 50%

6. Among white workers, what percentage are women?

   a. 35% b. 42% c. 30% d. 50%

7. In 1988, the median income for Hispanic women working year-round and full-time was:

   a. $16,424 b. $14,485 c. $18,093

8. In 1988, the median income for white men working year round and full-time was:

   a. $27,228 b. $22,429 c. $19,405 d. $29,998

9. In 1988, the median income for white women working year-round and full-time was:

   a. $17,819 b. $20,413 c. $15,423 d. $21,567

10. In 1988, the median income for women who had completed four years of college was:

    a. $21,899 b. $19,038 c. $29,765 d. $25,187

11. In 1988, the median income for men who had a high school diploma was:
    a. $26,045 b. $29,413 c. $23,788 d. $31,129

12. When 1989 median weekly earnings of full-time wage and salary workers were compared, the average woman earned how many cents compared to every dollar earned by the average man?

    a. $.65 b. $.60 c. $.75 d. $.70

13. More women are choosing to start their own businesses. Women's share of all sole proprietorships rose to what percent in 1986?

    a. 15% b. 22% c. 30% d. 39%

14. What percentage of mothers with preschoolers (children under 6 years) was in the labor force in 1988?

    a. 20% b. 45% c. 56% d. 38%

15. Of all persons over 16 years of age with poverty level incomes in 1988, what percentage were women?

    a. 34% b. 41% c. 62% d. 71%

16. In 1988, the poverty rate for all families maintained by women with children under the age of 18 was:

    a. 44.7% b. 36.2% c. 50.3% d. 26.3%

17. In 1989, women represented what percentage of administrative support (clerical) workers?

    a. 56.1% b. 68.9% c. 76.8% d. 80.0%

18. In 1989, women represented what percentage of precision production, craft and repair workers?

    a. 16.4% b. 21.2% c. 3.2% d. 9.0%

19. In 1988, the percentage of all poor families that were maintained by women:

    a. 35% b. 53% c. 47% d. 61%

20. The 1989 unemployment rate for black female teenagers, from 16-19 years, was:

    a. 20.7% b. 18.5% c. 26.4% d. 33.0%

Source: U.S. Department of Labor Women's Bureau, September, 1990.

WHAT DO YOU KNOW ABOUT WOMEN IN THE WORK FORCE?

Answers to Quiz:

1. d. 69%	8. a. $27,228	15. c. 62%
2. a. 35-44 years	9. a. $17,819	16. a. 44.7
3. b. 68%	10. d. $25,187	17. d. 80%
4. c. 29.3 years	11. a. $26,045	18. d. 9%
5. d. 50%	12. d. $.70	19. b. 53%
6. c. 42%	13. c. 30%	20. d. 33%
7. b. $14,485	14. c. 56%	

Appendix 4

SEX-ROLE ATTITUDE INVENTORY

Please answer the following questions based on your personal feelings about each of the ideas. There are no correct answers. Answer by circling the response which most closely represents your feelings using the following guide: SA = Strongly Agree; A = Agree; N = Neutral; D = Disagree; SD = Strongly Disagree.

	SA	A	N	D	SD
1. Women with preschool children should not work outside the home.					
2. The woman should be awarded custody of the children when a couple is divorced.					
3. Divorced men should not have to assume support for the children.					
4. Boys are more intelligent than girls.					
5. If a working couple buys a house, the husband should make the house payments.					
6. Women are entitled to use their sick leave for maternity leave.					
7. If a woman works outside the home, she should be responsible for the housework as well.					
8. I would vote for a woman for President if she were the best candidate.					
9. Women are less responsible than men.					
10. It is important for a man to be "masculine" and a woman to be "feminine".					
11. Men should not cry.					
12. Money spent on athletics should be evenly divided between boys and girls.					
13. Both men and women can be good doctors.					
14. Wives should make less money at their jobs than their husbands.					
15. Boys should have more education than girls.					
16. A system should be set up which would enable homemakers to accumulate Social Security benefits of their own without relying on those accumulated by their spouses.					
17. Women should not hold jobs on the night shift.					
18. Men should not do clerical work because they lack the necessary manual dexterity.					
19. Women can be capable administrators.					
20. Women should concentrate on finding jobs in the fields of nursing, teaching, clerical, and secretarial work since they already possess these types of skills.					

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Appendix 5

CURRENT BEHAVIOR PRACTICES

DIRECTIONS: Read each question or statement. Check your response--ALWAYS (A), OFTEN (O), RARELY (R), or NEVER (N)--in the appropriate column, indicating how often you engage in the practice.

	A	O	R	N
1. Encourage all students to make academic, career, and personal decisions on the basis of individual abilities, interests, and values rather than on the basis of gender.				
2. Encourage students to pursue a career even though the people in that field are primarily of the other sex.				
3. Discuss job salaries with both male and female students.				
4. Point out that typically female jobs means lower salaries than typically male jobs.				
5. Discuss armed services opportunities with both male and female students.				
6. Meet with nontraditional students on a regular basis to support them in their pioneering roles and to discuss any problems that may arise.				
7. Provide students about to enter the workforce with information about employment rights and discrimination laws.				
8. Encourage a wide range of job options with male students, including traditionally female occupations--even if they have already made a tentative career decision.				
9. Help students understand the changing roles of men and women and the effect this may have on their work and family lives.				
10. Arrange discussion groups and speakers on socialization pressures on males and females.				
11. Provide realistic information about their probable job futures. (Most women can expect to hold paying jobs even if they marry and have families.)				
12. Recognize barriers that young women raise for themselves in response to socialization pressures.				
13. Review all textbooks, curricular materials, and testing materials for sources of sex bias, and modify whenever appropriate.				

KNOWLEDGE OF LEGAL EQUITY QUIZ

1. Under the Title IX regulation, counselors are required to
   - A. Place work/study students by sex when requested by employers.
   - B. Discontinue use of male and female forms for vocational preference tests.
   - C. Mandate special programs to equalize past discrimination.
   - D. All of the above.

2. The Title IX regulation requires that
   - A. All stereotyped career materials be replaced by newly purchased ones.
   - B. Book publishers must bring their publications into compliance.
   - C. Testing materials such as aptitude or interest must be free from sex bias.
   - D. Discriminatory textbooks be revised or disregarded.

3. Of the following personnel decisions, which is most crucial to successful implementation of an affirmative action plan?
   - A. An attractive salary and advancement schedule.
   - B. Good company benefits.
   - C. Advertisement for and recruitment of qualified applicants.
   - D. Comprehensive grievance procedures.

4. Affirmative action means that

   - A. A policy of non-discrimination has been adopted by the organization.
   - B. A woman or minority person must be hired for a certain number of positions.
   - C. The distribution of minorities and women within an organization must reflect the general population percentages.
   - D. The organization is committed to moving beyond equal employment policies and to taking a series of positive actions to remediate past discrimination and prevent future discrimination.

5. Which of the following is a correct statement about the Title IX regulation and pregnancy?

   - A. A pregnant student may be required to attend a separate educational program.
   - B. It is a school board decision whether a student continues school attendance following pregnancy.
   - C. A school may ask a pregnant student for a health statement if this is standard procedure for other physical conditions.
   - D. It is at the school's discretion whether pregnancy must be treated as a temporary disability.

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6. *Affirmative action laws permit the use of sex as an employment criteria*

   A. In hiring and firing to correct an imbalance.
   B. In recruiting into the applicant pool.
   C. In positions which require special qualities such as strength or emotional sensitivity.
   D. As a technique to redress inequality.

7. An affirmative action plan for an educational program should include

   A. Assignment of staff to meet sex and race goals.
   B. Well-designed plan to prevent reverse discrimination.
   C. An analysis of student policies and extracurricular activities.
   D. Taking the time to recruit a large pool of well-qualified candidates.

ANSWER KEY

1. B	**6. B**
2. C	**7. C**
3. C	
4. D	
5. C	

The user is encouraged to consider relevant court cases and any other current information regarding legal issues.

Teaching Staff Survey

School Name	Subject Taught

Directions: Listed below are steps that teachers can take to achieve sex equity in the classroom. As you respond to the statements, think about your own classroom situation. For each item, please circle:

3 if it **has been** or is in the process of being done
2 if this is **in the planning stage**
1 if this **has not** been done, but will be considered

In the "Comments" sections, *describe* what equity strategies you have tried and the results.

Section 1: Curriculum and Materials

	Has been done	Planning stage	Not done
1. Review curriculum, content, activities, and projects for appropriateness to both females and males on a regular basis.	3	2	1
2. Eliminate or modify materials or activities that may reinforce bias and stereotyping	3	2	1
3. Collect and analyze enrollment statistics by course and program to determine female/male enrollment patterns	3	2	1
4. Infuse ideas about careers in lesson plans. Incorporate current information on changing trends in the work force. Discuss the importance of expanding female and male choices in careers	3	2	1
5. Reinforce realistic job futures (for example, most women and men can expect to hold paying jobs even if they marry and have families)	3	2	1
6. Use materials that show the changing roles of men and women, both in the workplace and in the family	3	2	1
7. Plan student activities that help female and male students work together more effectively	3	2	1
8. Design course information materials such as brochures, course descriptions, and handouts to encourage both females and males to enroll	3	2	1

Comments *(Describe activities and results)*:

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Section 2: Classroom Learning Environment

	Has been done	Planning stage	Not done
9. Evaluate teaching behaviors that encourage equity (for example, nonsexist language, discipline, and reinforcement as well as equal attention to females and males)	3	2	1
10. Portray females and males in both traditional and nontraditional roles during discussions and visually in materials and displays such as bulletin boards	3	2	1
11. Incorporate the topics of sex discrimination, stereotyping, and bias into regular course content and discussions whenever possible	3	2	1
12. Help arrange for nontraditional role models—both men and women—to be speakers for career days, shadowing, mentoring, and classroom instruction	3	2	1
13. Involve students in identifying examples of sex discrimination, stereotyping, and bias in textbooks, curriculum materials, and media	3	2	1
14. Assist both boys and girls in recognizing that it is very likely their adult roles will include paid work, parenting, and homemaking	3	2	1
15. Model sex-fair behavior in actions and words conveying to others the importance of equality	3	2	1

Comments *(Describe activities and results)*:

16. Check one (please do not omit): ☐ male
☐ female

17. On the back of this form, please describe the content and duration of any training in sex equity you have had.

18. Indicate the level(s) at which you are assigned:
- ☐ elementary (K-6)
- ☐ junior high (7-8)
- ☐ senior high (9-12)
- ☐ K-12 specialist

19. Which of the following best describes the area you teach?
- ☐ general (elementary, mathematics, English, physical education, music, and so forth)
- ☐ vocational (agriculture education, business education, technology education, and so forth)
- ☐ other (special/alternative programs) *(specify)* ______________________

7274.C2

Thank you for your time.

TEN SUGGESTIONS FOR A FAIR CLIMATE CLASSROOM

1. Expect and reward satisfactory performance from all students giving all students an opportunity for remedial help.
2. Define clear expectations for jobs and responsibilities. All students should be expected to carry the same workload with no special allowances.
3. Appraise each student according to specific goals and standards.
4. Be consistent when referring to students, whether you prefer using first names or last names.
5. Provide consistent discipline for students who harass their classmates.
6. Seat nontraditional enrollees among their other classmates instead of grouping them.
7. Encourage students in class to air their feelings and resolve their interpersonal conflicts as a group.
8. Help traditional students become comfortable with changes in the classroom climate because of the presence of nontraditional students.
9. Expect a normal rate of attrition from nontraditional students. If a student drops out of class, do not automatically assume that it was because of the student's gender.
10. Encourage nontraditional students to interest their friends in taking the course.

Adapted from: "Reducing Sex Bias/Stereotyping in Your Classroom," *Resource Review*, Maryland Vocational Curriculum Management System.

> ***Gender equity should not be a distinct program or curriculum. Rather, gender equity should be simply, "the way we do things here."***
>
> *Indiana Equity Consortium (Adapted)*

Gender Equity Tip Sheet

Behaviors of the Nonbiased Educator

Attitude — takes the idea of equality seriously; for example, does not denigrate men or women or joke about their abilities, roles, characteristics, and so forth.

Language — uses nonsexist language.

Generalizations — avoids generalizations that refer to gender; for example, "you drive like a woman" or "you think like a man."

Facts — uses accurate, factual knowledge about the current economic and legal status of women and men.

Comparisons — avoids comparisons of teachers or students based on gender; for example, would not say, "women cannot discipline students as well as men can," or "the girls are working harder than the boys."

Values — reinforces the expression of values from teachers and students so that both males and females can express assertiveness or gentleness.

Model — acts as a model of nonsexist behavior by performing activities traditionally thought to be done by the other sex; for example, males offer coffee and refreshments at meetings; females conduct maintenance inspections, or move tables and chairs.

Careers — publicly acknowledges the appropriateness of a wide range of career choices, interests and roles for both sexes.

Student Activities — recommends all school activities to both boys and girls; does not expect girls to have typically feminine interests and boys to have typically masculine interests.

Recognition of Achievement — gives equal attention to the academic and extracurricular achievements of both sexes; for example, recognizes the athletic achievements or community service of both girls and boys.

Academic Expectations — has the same expectations for academic achievement for boys as for girls; for example, does not expect girls usually to excel in verbal skills and boys usually to excel in mathematics.

Expression of Emotions — permits females and males to show their emotions without regard to gender so long as such behavior is within school rules.

Nonsexist Student Behavior — Requires student of both sexes to treat each other as equals; for example, does not allow sexist remarks by students to go unchallenged.

Behavior Expectations/Student Discipline — expects the same behavior from all students and reinforces the standards for discipline without regard to sex; for example, does not treat girls who are fighting differently than boys who are fighting.

Student Duties — assigns boys and girls to school duties and responsibilities on the basis of ability rather than gender; for example, both sexes help in the office, deliver messages, or carry equipment or supplies.

Source: Adapted from Cooperative Educational Service Agency for the Wisconsin Model for Sex Equity in Career and Vocational Education, Wisconsin Department of Public Information

Tips for Non-Stereotyped Teaching

One of the goals of gender equity is to provide unrestricted educational opportunities for all students. Gender equity activities should be deliberate efforts to expand career opportunities, achieve economic and political equity, and eliminate gender bias, stereotyping and discrimination. An important role for teachers is to encourage the development of responsible sex-fair attitudes and behaviors in their students.

Activity Ideas

- When reading a text that contains a stereotype or biased reference, stop and help students identify it. Discuss the origin or source of the stereotype. Plan a lesson around this activity.
- Allow students to do their own research on gender stereotypes. Direct them to study textbooks, library books, magazines, newspapers, advertisements, movies, television and store catalogs, and have them present their findings to the class.
- As a class project, rewrite a story reversing the male and female roles.
- Use bulletin boards and classroom displays as an avenue to present people in *all* roles. Let students participate. Do a collage of the people in your town, portraying both sexes in all kinds of groups and jobs.
- Invite local resource people to speak. Establish role models by concentrating on women and minorities in nontraditional roles.
- Dramatize popular TV commercials reversing the sex roles.
- Encourage a self-examination of attitudes and biases. Through open discussion, attempt to establish their origin.
- Examine the contemporary and historical forces and conditions that have disadvantaged women and minorities.
- Do not typecast people in jobs. Break the stereotyped pattern by presenting women as doctors, astronauts, truck drivers, etc., and men as nurses, secretaries and homemakers.
- Refer to all types of family structures in your teaching. Most texts depict the "typical" nuclear family. Women should also be portrayed as heads of families and working mothers. Fathers should also be presented as homemakers and single parents.

Source: Michigan Center for Career and Technical Education, Michigan State University

Ways Teachers Display Expectations

- Level of questions asked
- Amount of time given to formulate answers
- Non-verbal messages concerning the value of math and science and who "does" math and science are conveyed by:
  - Bulletin boards
  - Time allocation
  - Text materials
  - Pictures
  - Course structure

Source: Access to Scientific Professions: Increase Representation and Equity manual, Michigan Department of Education

What Can We Do?

- Use cooperative learning in the classroom.
- Allow students to work together when learning or practicing.
- Reward diversity and creativity in problem solving instead of speed.
- Structure courses so all students can be successful; no one has to fail.
- Reward group success.

Source: Access to Scientific Professions: Increase Representation and Equity manual, Michigan Department of Education

WAYS TO LINE UP

(OTHER THAN BY SEX)

Alphabetically by

- Z to A
- Last name
- First name
- Street name
- Father's name
- Mother's name

By Clothing

- Kind of shirts
- Colors of socks
- Jeans or non-jeans
- Shoe styles or colors
- Belted and unbelted
- Collars and collarless
- Stripes and no stripes
- Short sleeves or long sleeves

Numerically by

- Vowels in name
- Syllables in name
- Number of buttons
- Consonants in name
- Multiples of 2, 3, 5, 10...
- Last digit of phone number
- Number of brothers and sisters
- Combined ages of brothers and sisters

By Identifying

- Vowel sounds
- Right and left
- First and last
- Before and after
- Animal and insect sounds
- Pennies, nickels, dimes, quarters
- Beginning and ending consonants

By Favorite

- Sport
- Movie
- Flower
- Season
- Animal
- Vegetable
- Ice cream
- Hero/heroine

CAN YOU MAKE LINING UP AN EQUITABLE LEARNING EXPERIENCE FOR CHILDREN?

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RED FLAG TERMS

Be wary when using any of the terms below; they can easily be misinterpreted or misunderstood. ***Be able to define each term precisely.*** Explain terms when you use them, if at all possible.

	EDUCATOR'S DEFINITION	CRITICS' DEFINITION
Cooperative Learning	Small groups of students working together in activities set up by the teacher to study, discuss subject matter, solve problems, or complete projects. The teacher moves about the classroom, monitoring the activity and progress of each group and working with students as needed.	Kids teaching other kids with no active role for the teacher.
Critical Thinking	Developing the capacity to think in a thoughtful, discerning way, to solve problems, analyze data, and recall and use information.	Learning to criticize your parents and question family values.
Experimental Programs	An innovative program that has been or is in the process of being studied.	Anything that does not have hard data and airtight guarantees to support it.
Global Education	Learning about those problems and issues that cut across national boundaries, and about the interconnectedness of systems--ecological, cultural, economic, political, and technological. Global education involves perspective taking--seeing things through the eyes and minds of others--and it means the realization that while individuals and groups may view life differently, they also have common needs and wants (Tye 1990).	An attempt to eliminate patriotism.
Mastery Learning	A teaching approach that emphasizes the mastery of well-defined tasks. Teachers break knowledge and skills into steps or units, giving students a clear description of what they are expected to do and how their success will be measured. Mastery is not measured through a one-time-only test; students have opportunities to work with concepts and correct errors.	Teaching all children one limited task, then making sure all of them can master the task and pass a test on it.
Outcome-Based Education	Identifying what graduates should know and be able to do to succeed in the future, then redesigning teaching, learning, curriculum, instruction, and assessment to help all students reach these goals. Rather than measuring student progress simply by the amount of time students have spent in a course, outcome-based education is directed toward measuring real student achievement.	Teaching students to pass the test.

(over)

Promoting Self-Esteem	Helping students feel good about themselves by consciously giving them positive, encouraging attention; making them aware of their strengths; and helping them develop the ability to take responsibility for their own learning.	Allowing educators who are not licensed to practice psychiatry or psychol[illegible] (especially teachers) to use behav[illegible] modification therapy to persuade students to conform to certain standards.
School-Based Management/Shared Decision Making	Allowing a school greater autonomy through some combination of site budgetary control and relief from constraining rules and regulations and through sharing with teachers--and sometimes parents, students, and other community members--the authority to make the many decisions that affect students (David,1989).	A set-up that gives principals and teachers too much control and parents very little. The school board becomes irrelevant and no one is truly accountable.
Teachers as Coach	The teacher helps students take the initiative to become actively involved in their own learning.	The teacher becomes a discussion group leader instead of fulfilling the appropriate role of the classroom authority figure.
Teaching Decision-making	Helping children make use of their innate ability to think, to choose, and to act wisely (Harmin 1990, p3) by teaching them skills for making important decisions--for example, gathering relevant information, determining the criteria important to a good decision, and weighing the alternatives.	Learning that it is okay to take drugs instead of being taught outright that it is wrong and illegal. (There is no need for decision making to be taught, because right and wrong are absolutes.)
Whole Language	A language arts program based on the idea that reading, writing, speaking, and listening are natural and interrelated processes learned in similar ways. Typically, students learn to read and write primarily by comprehending words in context, rather than by sounding out letters and syllables, through words are sometimes sounded out. Students discuss what they are reading, try many kinds of writing, and read their compositions to their classmates. A whole-language program supports the integrated development of the skills necessary for literacy.	Learning to look, see, guess--attempting to learn to read without phonics and traditional grammatical usage and form.

References

David, Jane L. (May 1989). "Synthesis of Research on School-Based Management." Educational Leadership 46, 8: 45-53.

Harmin, Merrill (1990). **How to Plan a Program for Moral Education.** Alexandria, Va.:ASCD:

Tye, Kenneth A., ed. (1990). **Global Education: From Thought to Action.** Alexandria, Va.:ASCD.

Ways to Make Math and Science Meaningful

- Integrate mathematics, science and other subject areas
- Utility and practical applications versus heavy reliance on theory
- "Hands on" laboratory-activity orientation
- Real-life problems based on the interests and concerns of the targeted group

—Mathematics and Science: Critical Filters for the Future of Minority Students, 1988

Source: Access to Scientific Professions: Increase Representation and Equity :nanual, Michigan Department of Education

Gender Equity Tip Sheet

Encouraging Female Participation in Mathematics

Mathematics is a "critical filter" in the educational process. Avoidance of math prerequisites may prevent or inhibit students from entering careers with better salaries and advancement opportunities. Current studies indicate that in schools, sex bias inhibits girls from reaching their full potential in mathematics. The myth that these disciplines are male domains still persists. Schools can help negate the myth by creating a climate in which both males and females learn math skills effectively. (Source: *Gender Bias in Mathematics, Science and Technology Report Card #3,* developed by Mary Jo Strauss.)

Criteria for Equitable Mathematics Activities

1. Teacher is enthusiastic and has equal expectations for all students.
2. Written materials and verbal instructions use gender-free language.
3. Activities relevant to all students' lives are stressed.
4. "Hands-on" experience is required from all students.
5. Problems do not always demand one "right" answer.
6. Career information relevant to the activity is presented. Examples of female role models are included.

What Teachers Can Do

1. Use the same standards for math performance regardless of a student's gender.
2. Have the students do activities, like making bread, to learn math, rather than just reading problems or doing worksheets.
3. Develop inservice programs to introduce new math concepts and teaching techniques.
4. De-emphasize the "rare bird" phenomena for females who do well in math and males who do not. Assume that there will be females in advanced math classes.
5. Make short biographies of women and men mathematicians available in the classroom.
6. Invite women and men to visit your class to talk about their math-related jobs and the kind of preparation necessary for those jobs.
7. Work with your school counselor to see that good, non-biased vocational information about math-related careers is available.
8. Examine your classroom, textbooks and lesson plans for stereotypic attitudes, opinions and activities.

Sources: "Sex Stereotyping in Math Doesn't Add Up"; Michigan Center for Career and Technical Education, Michigan State University

GENDER EQUITY WORKSHOP OUTLINE AND MATERIALS

JANE HOWELL, ANNE CANTOR, JO ANN LUTZ, SANDY SCHOFF, AND THEODORA REYNOLDS

THE FOLLOWING is an outline for a workshop on gender equity in mathematics and science that can be used as is or modified to meet the needs of the presenter and/or audience. The workshop is centered around a series of questions with activities and discussion related to each question.

I. **What happens in classrooms?**

II. **Which students do mathematics and science well?**

III. **What is equity?**

IV. **What does current research indicate about gender equity?**

V. **What *should* happen in classrooms?**

No specific time frame for these activities has been established. Included are:

- Notes for workshop leader
- Transparency Masters
- Master copy for "Which Word Fits" Activity

Note: (TR. #) in the notes indicates that a transparency is provided.

Outline for Workshop (TR. #1)

I. What happens in classrooms? (TR. #2)

Before responding to this question, show a short video regarding classroom practice.

Video Choices: 20/20
Jane Pauley
"Making Points"

Possible Option: Use one of the skit scripts in this module that was prepared by WW-GEMS participants.

Discussion:

From Myra and David Sadker
Boys receive significantly more remediation, criticism, and praise than girls. Boys are given more time to talk in class.

Teachers are generally unaware of the presence or the impact of such bias. Only when they view video tapes of their own classes do they see (with surprise) their own gender bias. Both male and female teachers are guilty.

From AAUW "Shortchanging Girls, Shortchanging America"
The longer we teach students the less they like science and mathematics. This is true for both boys and girls.

Boys and girls lose self-esteem in school. Girls lose significantly more, especially during middle school years.

Differences between girls and boys in math achievement are small and declining. Yet, in high school, girls are still less likely than boys to take the more advanced courses and to be in the top math groups. In science, however, the gender gap is not decreasing and may, in fact, be increasing.

Even girls who are highly competent in math and science are much less likely to pursue scientific or technological careers than their male classmates.

Pedagogy designed to meet the needs of girls is NOT anti-male. In fact this pedagogy will meet the needs of many male and minority students who do not currently succeed in math.

From Judith Jacobs
In many classrooms the teacher acts as the fountain of knowledge, and the students are knowledge receivers.

From Elizabeth Fennema
There is little overt sexism. Data indicate little difference in treatment of students by male or female teachers.

II. Which students do mathematics and science well? (TR. # 3)

Activity from Judith Jacobs: Which Words Fit?
Have each member of the audience complete one of the six exercises in which they match descriptors to types of students. Have those people with the same student compare their descriptors and generate a common list. Then, in the large group, discuss the descriptors for each type of student, taking special note of the two generic students (Pat). (TR #4) A master copy for handouts for this activity can be found following the transparencies.

Discussion: Is there a connection between the group and the following beliefs found in research. (TR. #5).

Beliefs found in early research:

- Math and science are male domains.
- You have to be a genius or have a mathematical mind in order to do math.
- If you're good in language arts, you aren't good in math.
- Math is done instantly if at all.
- There is only one right way to do a problem.

More current findings:

- Boys receive significantly more attention.
- The longer we teach students the less they like science and math.
- Even girls who are very able in science are less likely to pursue scientific or technological careers than boys.
- There is very little overt sexism by teachers regardless of gender.
- Diagram for learning attribution theory. (TR. #6) Audience will fill in the boxes as an activity (Tobias).

Learning Attribution Theory

	Success	Failure
Males	Ability	Lack of Effort
Females	Luck	Lack of Ability

Notes from Sheila Tobias
Briefly explain the us/them and the multiple tier theory. While the Tobias research was based on college students, this construct can be adapted to high school students. (TR. #7 & #8)

Second tier students who have the potential to do well in mathematics and science tend to (1) have high verbal/analytical skills, (2) have strong compare/contrast powers, (3) use common sense and logic, (4) have divergent (vs. convergent) thinking skills, (5) pose questions well, (6) be model sensitive—capable of disentwining models from nature—distinguish a model from a fact, and (7) need to see the "big picture" or overview.

III. What is equity? (TR. #9)

Have each member of the audience write a response to the question "What is Equity?" Then facilitate a discussion with the whole group. An additional question might be "**When is Equity Achieved?**"

(Use TR. #10)

From Elizabeth Fennema

- The goal is equal outcomes.

- Legal responsibility is to provide equal opportunity/access or equal treatment.

- Equity will be achieved when outcomes are the same for all students (on an average within groups).

(TR. #11)

IV. What does current research indicate about gender equity? (TR. #12)

(Use TR. # 13)

- **Research in gender issues is value laden — it starts with a set of beliefs.**

Research in gender issues is value laden. There are two basic sets of beliefs from which people operate (Fennema).

In the first set of values people believe that no sex related differences exist that are important to learning. Males and females are equal intellectually if left alone. It is the socialization of boys and girls that leads to the differences in outcomes. Title IX intervention programs are based on this premise. Such intervention programs include EQUALS (Lawrence Hall of Science, CA), GESA (Gender Equity and Student Achievement), SEED (Seeking Educational Equity and Diversity), etc.

Girls and boys have the same intellectual capacity, and girls are not cognitively handicapped. We must examine society's beliefs and learning environments to explain girls' consistently lower scores than boys on higher level mathematics tests (Tobias).

In the second set of values, males and females are considered to be basically very different in the way they learn. Boys tend to use deductive, rigorous, structured, and axiomatic thinking. Girls use inductive, experiential, creative, and intuitive thinking and are more influenced by their cultural environment. The first is labeled as separate knowing, and the second is labeled as connected knowing (Jacobs).

- **Girls receive substantially less attention in classes than boys.**

Not only do boys get more attention, but they get precise praise while girls get neutral praise. Boys get follow-up questions that involve higher level thinking. When boys call out, teachers focus on their answers. When girls call out, teachers remediate their behavior (Sadker & Sadker).

There is little overt sexism by teachers. Teachers interact more with boys than with girls. Student behavior determines teacher-pupil interaction patterns. Teachers react rather than initiate. Learning environments are structured to be more effective for boys than for girls (Fennema).

- **Society's beliefs influence students' beliefs about math and science.**

When girls are asked "with whom and how often do you talk about the math you are doing in school?" they consistently respond, "never" and "with no one" (Tobias).

The worst hidden behavior of teachers is the overnurturing of female learners (especially by men). Students learn better when teachers demand independent learning. Girls' success is based on self-esteem (Fennema).

- **Girls and boys perceive their successes and failures differently.**

When girls do well in math, they attribute it to luck; and when they do poorly, they attribute it to their lack of ability. When boys do well in math, they attribute it to their ability; and when they do poorly, they attribute it to lack of effort. Refer to Learning Attribution Theory (TR. #6 and notes on page 100 of this unit). Boys see their successes and girls see their failures as internally determined. Boys see their failures and girls see their successes as externally determined.

- **Confidence and self esteem are key to girls' success in math and science.**

Sixth grade girls' level of confidence predicts twelfth grade achievement (Fennema).

- Anything we do to improve overall instruction will disproportionately benefit females and minorities (Tobias).
- In general, boys respond well to competitive situations, while girls respond well to collaborative situations.
- The self esteem of girls declines steadily after they leave elementary school.

The Fennema-Sherman studies of 1974 indicate that the critical variables for girls are (a) confidence, (b) recognizing the usefulness of mathematics, (c) teacher attitudes, and (d) attitude that math is a male domain.

Carol Gilligan in *In a Different Voice* says that women and men approach moral decision making in different ways. Women are more concerned with relationships; men are more concerned about the rules of the game. The implication is that teachers should look for more than one way to teach mathematics or should teach different mathematics. In the past, women's ways have not been valued.

V. What *should* happen in classrooms? (TR. #14)

Brainstorming: Ask "Based on the information from our discussion, what should happen in a reformed classroom?" (TR. #15)

- Cooperative and competitive activities
- Connectedness of mathematics
- Mathematics relevant to students' lives, interests, and feelings
- Learning facilitated in a variety of ways
- Communication
- Constructive feedback that helps students acquire a "can do" attitude
- Mathematics invented by students
- Higher order questions for all students
- Seeking multiple solutions to problems
- Independent thinking
- Assessment to reflect what is valued in the classroom
- Challenging classes taken by students who are able
- Metacognition — thinking about thinking
- Value placed on students' thinking
- Proactive behavior to insure that girls' voices are heard (Use TR. #16)

I. What happens in classrooms?

II. Which students do mathematics and science well?

III. What is equity?

IV. What does current research indicate about gender equity?

V. What should happen in classrooms?

WHAT HAPPENS IN CLASSROOMS?

Transparency No. 2

WHICH STUDENTS DO MATHEMATICS AND SCIENCE WELL?

Transparency No. 3

Which Words Fit?

The following words and phrases can be used to describe a student's behavior in a mathematics/science class:

active
adventurous
aggressive
appreciative
assertive
conscientious

considerate
frank
curious
dependable
efficient
energetic

enterprising
cooperative
independent
inventive
mannerly
neat

persistent
poised
punctual
obliging
sensitive
thorough

regularly does homework
dislikes doing math/science
takes detailed notes
mimics the teacher's or book's solution
likes solving problems in different ways
asks questions about "why"
asks for help after class

rarely does homework
enjoys doing math/science
rarely takes notes
solves problems in inventive ways
good at using algorithms and rules
asks questions about "how"
likes figuring things out alone

Beliefs found in early research:

- Math and science are male domains.
- You have to be a genius or have a mathematical mind in order to do math.
- If you're good in language arts, you aren't good in math.
- Math is done instantly if at all.
- There is only one right way to do a problem.

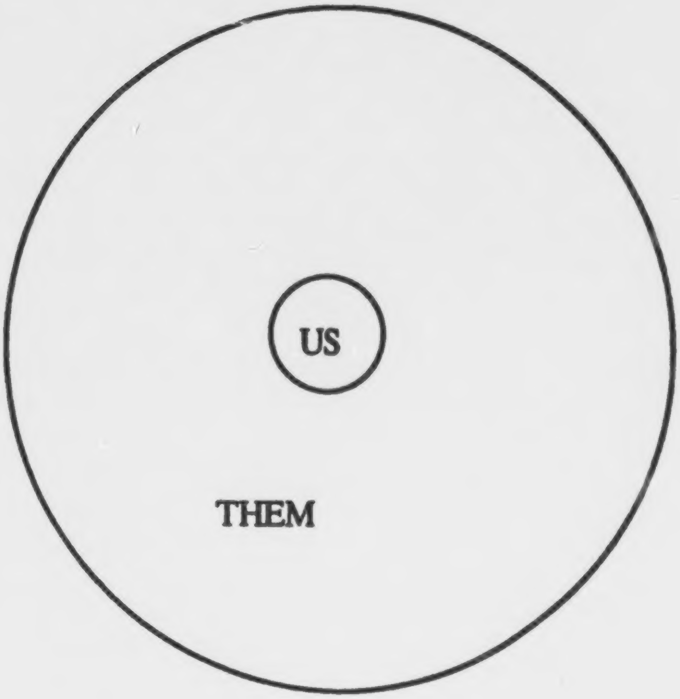
More current findings:

- Boys receive significantly more attention.
- The longer we teach students the less they like science and math.
- Even girls who are very able in science are less likely to pursue scientific or technological careers than boys.
- There is very little overt sexism by teachers regardless of gender.

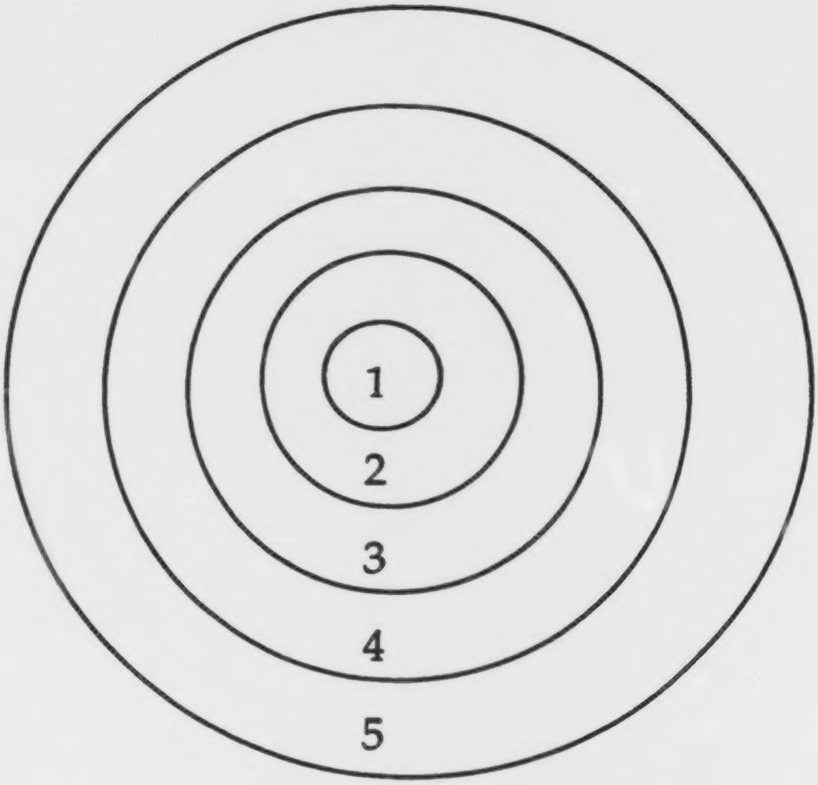
Learning Attribution Theory

	Success	Failure
Males		
Females		

Tier Analysis — Sheila Tobias



- "Us" is a small gifted group
- "Them" is not worth worrying about
  Must be weeded out



- 1st tier — very interested and able
  - — are teacher proof
- 2nd tier — highly verbal
  - — able
- 3rd tier — utilitarians
  - — do minimum to pass the course
- 4th tier — underprepared
  - — lacking in skills
- 5th tier — unlikelies
  - — hostile to math and science

Transparency No. 8

WHAT IS EQUITY?

Equal Treatment

Equal Opportunities

Equal Outcomes

Transparency No.10

What does "equal outcomes" mean for mathematics and science education?

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WHAT DOES CURRENT RESEARCH INDICATE ABOUT GENDER EQUITY?

- Research in gender issues is value laden — it starts with a set of beliefs.

  Female thinking = Male thinking

  Man's way of knowing vs. woman's way of knowing

- Girls receive substantially less attention in classes than boys.
- Society's beliefs influence students' beliefs about math and science.
- Girls and boys perceive their successes and failures differently.
- Confidence and self-esteem are key to girls' success in math and science.
- Anything we do to improve overall instruction will disproportionately benefit females and minorities.
- In general, boys respond well to competitive situations, while girls respond well to collaborative situations.
- The self esteem of girls declines steadily after they leave elementary school.

Transparency No. 13

WHAT *SHOULD* HAPPEN IN CLASSROOMS ?

Transparency No. 14

- Cooperative and competitive activities
- Connectedness of mathematics
- Mathematics relevant to student lives, interests, and feelings
- Learning facilitated in a variety of ways
- Communication
- Constructive feedback that helps students acquire a "can do" attitude
- Mathematics invented by students
- Higher order questions for all students
- Seeking multiple solutions to problems
- Independent thinking
- Assessment to reflect what is valued in the classroom
- Challenging classes taken by students who are able
- Metacognition — thinking about thinking
- Value placed on student's thinking
- Proactive behavior to insure that girls' voices are heard

Teachers' knowledge

is what

makes the difference.

Transparency No. 16

Which Words Fit?

The following words and phrases can be used to describe a student's behavior in a mathematics/science class:

active
adventurous
aggressive
appreciative
assertive
conscientious
considerate
frank
curious
dependable
efficient
energetic
enterprising
cooperative
independent
inventive
mannerly
neat
persistent
poised
punctual
obliging
sensitive
thorough

regularly does homework
dislikes doing math/science
takes detailed notes
mimics the teacher's or book's solution
likes solving problems in different ways
asks questions about "why"
asks for help after class

rarely does homework
enjoys doing math/science
rarely takes notes
solves problems in inventive ways
good at using algorithms and rules
asks questions about "how"
likes figuring things out alone

(From this sheet make 6 individual sheets and use the following names to fill in the instruction: "From this list, pick those descriptors that describe ________"
Bonnie, a good math/science student;
Doug, a good math/science student;
Greg, a poor math/science student;
Sheryl, a poor math/science student;
Pat, a good math/science student; or
Pat, a poor math/science student.)

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Gender Equity Tip Sheet

Achieving Equity Through Gender-Neutral Language

> "Language is our most common tool.
> It not only mirrors our thoughts, it also shapes them."
> —*Anonymous*

According to the Mid-Atlantic Center for Sex Equity, studies with elementary, secondary and college students show that when a supposed generic term such as "mankind" is used, people envision males even when the content implies both men and women. In another study, students illustrated supposedly generic references (i.e. "urban man") with male pictures more than they did when the references were gender neutral (i.e. "urban life"). Other research has shown that when male generic nouns and pronouns are used to describe jobs, female students describe the jobs as less attractive to them than when sex neutral terms are used.

Guidelines for Eliminating Sexist Language

- Don't use masculine pronouns (he, his, him, himself) generically. Instead, make the subject plural or use such terms as "technician" or "flight attendant."
- When addressing the class, use terminology that includes both women and men. Avoid such phrases as "you guys" or "ladies."
- Whenever possible, use substitutions for words that begin or end with "man" (i.e. chairman = chair, workman = worker, foreman = supervisor).
- Avoid the use of the word "girl" unless referring to a female child.
- Use parallel terms for women and men (i.e. men/women, girls/boys).
- Refer to women by name in the same way that you refer to men.
- Don't refer to women in terms of their roles as wife, mother, sister, or daughter unless the context indicates these roles are significant.
- Avoid placing either sex in a special category by saying "female welder" or "male nurse."
- Eliminate gratuitous physical descriptions.
- When talking about occupations, use language that does not reinforce limited views of men's and women's career choices. For example, "The chemist works with compounds that will enable *her* to..." or "The dental hygienist prepares *his* equipment by...."

Classroom Activities

- Ask students to brainstorm and suggest gender neutral alternatives to sex-biased job titles (i.e. fireman, mailman, stewardess, housewife).
- Ask students to illustrate what they visualize when they hear sex-biased language. Compare the illustrations to images produced by gender-neutral language.
- Ask students to discuss various ways in which language affects our perception of reality.

Source: Michigan Center for Career and Technical Education, Michigan State University

BIAS-FREE LANGUAGE

Research by various linguists, social scientists and educators indicates that for the majority of males and females who participated in their studies, words do make a difference.

When 100 children between nursery school and seventh grade were asked to respond to the word "man" in sentences such as "Man must work in order to eat," and "Around the world, man is happy,"

- a majority of the children interpreted "man" to mean males and not females.

When 50 high school students were asked to illustrate seven statements on human activities during early civilization, students drew:

- male figures for six of the seven statements when the words "man," "mankind" and "primitive man" were used.
- male figures for a majority of the statements when the words "people" and "human" were used.
- more females than previously for statements when the words "men and women" were used.

Three hundred college students were asked to select pictures to illustrate chapter title pages for a proposed sociology textbook. When the words

- "political man" and "urban man" were used, 64 percent of the students selected all male pictures.
- "political behavior" or "urban life" were used, only 50 percent of the students chose male pictures.

When college students in another study were asked to react to the masculine pronoun "he" in multiple choice statements, the word "he" was interpreted as

- male 407 times.
- female 53 times.

When high school students were asked to rate their interest in job advertisements written in neutral and varied language.

- females showed no interest in jobs labeled as "frameman" or "lineman," but showed interest in jobs labeled as "framewoman."
- males showed no interest in "operator" or "sales representative" jobs when associated with the word "she" and showed an interest in "telephone operator" jobs when associated with the word "he."
- male pronouns such as "he" are used to describe science/industrial arts teachers.
- physical properties illustrated in science and industrial arts textbooks are associated with traditional male roles.

A study of 100 secondary home economics textbooks published from 1964-1974 by 54 companies showed:

- nurturing males zero (0) times and nurturing females 38 times.
- males in the home 52 times and females in the home 199 times.
- males interested in clothes 9 times and females interested in clothes 107 times.
- males interested in nutrition 17 times and females interested in nutrition 60 times.

A study of 10 most popular children's TV programs showed:

- good males 67 times and good females 43 times.
- aggressive males 25 times and aggressive females 14 times.
- passive males 25 times and passive females 37 times.
- magical males 4 times and magical females 16 times.

Observations of TV and magazine advertising shows:

- boys as active and girls as passive.
- men as coming home from work and females as staying home, caring for children, washing dishes and doing laundry.
- men as good-looking, muscular and athletic and women as sex objects.

Adapted from: Changing Roles of Men and Women: Educating for Equity in the Workplace. Vocational Center, School of Education, University of Wisconsin-Madison.

Prepared by New York State Equity Center.

Word Exchange

Biased	Nonbiased
businessman	business manager or executive
chairman	chairperson, leader
cleaning lady	housekeeper, custodian
colored people	people of color
congressman	member of Congress, congressional representative
craftsman	craft worker
craftsmanship	artisanship
crippled	disabled
deaf and dumb	deaf
fits	seizures
fireman	firefighter
foreman	supervisor, manager
freshman	first-year student
gal Friday	assistant
hard of hearing	hearing-impaired
housewife	homemaker
ladylike	well mannered
middleman	middle person, intermediary
mailman	letter carrier
man-hours	staff hours, working hours
mankind	humanity
manmade	synthetic, artificial
manpower	skilled labor, labor force
man-sized job	big or enormous job
mongolism	Down's syndrome
policeman	police officer
repairman	repairer
spokesman	spokesperson, speaker
sportsmanship	sense of fair play
stewardess	flight attendant
workman	worker
workman's compensation	worker's compensation

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Sentence Exchange

Biased	Nonbiased
The labor force needs skilled men.	The labor force needs skilled men and women.
John Doe is a competent executive, and his wife is a charming blonde.	John's a competent executive, and Ann is an excellent reporter.
Ask the girls to type the report.	Ask the secretaries to type the report.
She's a career woman.	She's a biologist.
Welcome, ladies and men.	Welcome, ladies and gentlemen. Welcome, women and men.
The executives' wives will assemble.	The executives' spouses will assemble.
A good mechanic knows his customers.	A good mechanic knows his or her customers. Good mechanics know their customers.
It's a pleasure to meet a pretty girl such as you.	It's a pleasure to meet you.
This is Mrs. John Brown.	This is Ms. Ann Brown.
John and his wife are homeowners.	John and Ann are homeowners.
Today's young men want opportunities.	Today's young women and men want opportunities.
Their son is retarded.*	Their son is a slow learner/has a learning disability/has a cognitive disability.
Infants need a mother's care.	Infants need parental care.
She's a tomboy.	She's an energetic and curious person.
He helps his wife at home.	He and his wife share household duties.
Epileptics* are dependable workers.	People who have epilepsy are dependable workers.
The handicapped people formed an organization.	Several persons, each with some disability, formed an organization.
Mary is a black* friend of mine.	Mary is a friend of mine.

---

* The race, ethnicity, color, sex, marital status, or handicapping condition of a person should be avoided unless it is pertinent to the context of your message.

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What Color Is Your Language?

Adapted from the Illinois State Board of Education, Department of Adult, Vocational and Technical Education, 100 North First Street, E-426, Innovation and Performance Management Section, Springfield, IL 62777, 1987. The original text has been changed or expanded upon to accommodate the issues, concepts, and language used in this publication. It can be used to construct diverse equity awareness activities.

At some point, we've all had someone misinterpret comments we've made. That's why educators, employers, and parents need to be aware of hidden meanings in their words. Some remarks and words can be interpreted to imply that racial and ethnic groups, women, men, or handicapped persons are superior or inferior to others when the speaker may have no intention of conveying such messages. Word choice may unintentionally distort or "shade" a message's real meaning.

In a sense, we need to carefully consider word choice to avoid negative or offensive shades of meaning. Such unbiased language plays an important role in encouraging students to explore career options based on their interests, not prescribed or restricted roles. Unbiased word choice avoids terms restricted to certain groups or gender—terms that label, like the clothing colors of pink and blue.

Instead, think purple. Purple is a mix of half pink and half blue. It's a blend that's in between and promotes fairness. By hearing "purple words," students receive messages that they have a fair chance and choice in career education and training, regardless of sex, race, or color.

This discussion cannot possibly include all biased words and remarks. But it does offer some brief tips on how to change those most commonly used. So, think purple. And show your winning color.

Do you reinforce racial, sex-role, or ethnic stereotypes? Examples include: "intelligent black students" (implies that most blacks are unintelligent); "the women were calm and rational" (implies that most women are emotional and irrational); "the conscientious Puerto Rican" (implies that most Puerto Ricans are not conscientious); "Jack, who is disabled, is the best technician" (implies that Jack is being put in the spotlight because of his disability, rather than his work performance).

Do you quote only men and refer to only notable men of the past or present? Include more references to notable women and minorities.

Do you use descriptions of personality traits that are sex biased or ethnic linked? Examples include "her hysterical remarks" (excited remarks), "his timid response" (hesitant response), "the emotional Italian," "the slovenly Mexican."

Do you refer to women as being overly concerned with clothing and hairstyle? Men, too, are concerned about their image. Women are also concerned about the economy, the labor force, national affairs, and other universal matters.

Do you refer to men or certain racial/ethnic groups as capable, aggressive, and brave, and to women and other groups of persons as fearful, emotional, and dependent? Men, women, and all ethnic/racial groups possess both strengths and weaknesses. Acknowledge all characteristics for all persons.

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THE POWER OF LANGUAGE:
UNBIASED JOB TITLES OPEN UP CAREER CHOICES

BIASED JOB TITLES	UNBIASED JOB TITLES
Assemblyman	
Businessman	
Cameraman	
Cleaning Lady	
Clergyman	
Congressman	
Craftsman	
Deliveryman	
Draftsman	
Fireman	
Foreman	
Gal Friday	
Insurance Man	
Middleman	
Mailman	
Man Hours	
Manpower	
Metermaid	
Paperboy	
Policeman	
Repairman	
Salesman	
Spokesman	
Stewardess	
Weatherman	
Workman's Compensation	

THE POWER OF LANGUAGE:
UNBIASED JOB TITLES OPEN UP CAREER CHOICES

BIASED JOB TITLES	UNBIASED JOB TITLES
Assemblyman	Assembler
Businessman	Business Manager or Executive
Cameraman	Camera Operator
Cleaning Lady	Housekeeper or Custodian
Clergyman	Clergy
Congressman	Congressperson or Congressional Representative
Craftsman	Craft Worker, Skilled Worker, Artisan
Deliveryman	Deliverer
Draftsman	Drafter
Fireman	Firefighter
Foreman	Supervisor or Manager
Gal Friday	Assistant
Insurance Man	Insurance Agent
Middleman	Liaison or Intermediary
Mailman	Letter Carrier
Man Hours	Staff Hours or Working Hours
Manpower	Labor Force, Human Resources, Workers
Metermaid	Parking Attendant
Paperboy	Newspaper Carrier
Policeman	Police Officer
Repairman	Repairer, Repair Person
Salesman	Sales Agent, Sales Associate
Spokesman	Spokesperson or Speaker
Stewardess	Flight Attendant
Weatherman	Weather Forecaster, Meteorologist
Workman's Compensation	Worker's Compensation

Source: NYS Occupational Education Equity Center.

Evaluation of Sex-Fair Language Usage

Adapted from *A Guide to Curriculum Planning in Technology Education*, Madison, WI: Wisconsin Department of Public Instruction, 1988, p. 129.

Directions: Using this checklist, assess the degree to which your personal language usage is sex fair. Also use this checklist to assess the sex fairness of language in instructional materials.

		Yes	No
1.	Are both pronouns (*she/he* and *him/her*) or plural pronouns used whenever sex is unspecified?	☐	☐
2.	Do pronouns and their antecedents apply to both sexes when general references are made to careers and occupations ("A computer programmer is a skilled person. He/she is required to perform a number of tasks.")?	☐	☐
3.	Are universal male terms avoided when the career or occupation is meant to include both sexes (sales *agent* instead of sales*man*, business*person* instead of business*man*)?	☐	☐
4.	When referring to both sexes, are the female and male terms used alternately throughout the text (*girls and boys, he/she*)?	☐	☐
5.	Do you avoid unnecessary clarification when men and women hold nontraditional jobs ("*male* secretary," "*woman* business owner")?	☐	☐
6.	Are occupational titles that use "man" as the suffix avoided (chair*man*, business*man*, sales*man*)?	☐	☐
7.	Are parallel terms used in referring to females and males ("Dr. Jones and Ms. Smith" rather than "Dr. Jones and Nancy")?	☐	☐
8.	Do the words "women" and "female" replace demeaning synonyms, such as *girls* (in reference to adults), *fair sex*, *chicks*, or *ladies*?	☐	☐
9.	Are women described in terms of their appearance or marital status, while men are described in terms of accomplishments or titles?	☐	☐
10.	Are women consistently presented as either dependent on or subordinate to men?	☐	☐
11.	Do materials use sex-fair language but slip into the use of the generic *he*?	☐	☐
12.	Are quotations, references, and supplemental study materials authored by women as well as men?	☐	☐

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A DEFINITION OF HARASSMENT

Sexual Harassment is any unwanted and unwelcome verbal or physical sexual advance or sexually explicit derogatory statements made by someone in the classroom or workplace, which are offensive or cause the recipient discomfort or humiliation, or interfere with the recipient's education or job performance.

THREE CATEGORIES OF SEXUAL HARASSMENT:

1. Quid Pro Quo - "something for something" - submission to sexual conduct is made a condition of employment or educational benefits.

   *"Quid pro quo" applies when a person in a higher position - a boss, teacher, or supervisor - makes decisions that affect an employee's job based on whether the employee complies with his or her sexual demands.

2. Sexual Favoritism - "preferential treatment" - an employee receives opportunities or benefits (e.g., better work assignments) as a result of submission to the supervisor's sexual advances.

   *"Sexual favoritism" (as a form of sexual harassment) applies to any employee who is not receiving the same preferential treatment as the employee involved in the relationship with the supervisor.

3. Hostile Environment - "conditions of work" - unwelcome and pervasive or continuous harassment which creates an intimidating, hostile, or offensive environment in which one has to work or learn.

   *"Hostile environment" applies when the harassing behavior of anyone in the workplace - not only a boss, supervisor, or teacher - causes the workplace to become hostile, intimidating or offensive and unreasonably interferes with an employee's work.

Courtesy of SUNY College of Agriculture and Technology at Cobleskill

What is Sexual Harassment?

Both federal and state laws make sexual harassment in the workplace and in schools illegal. Therefore, it is important to understand what types of conduct are prohibited. Defining sexual harassment has been the job of the courts and administrative agencies, primarily in employment cases. Since this is a new area of the law, they continue to refine the definition.

General Definition

The most common definition of sexual harassment is the one developed by the U.S. Equal Employment Opportunity Commission. It states that unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature are sexual harassment when:

1) submitting to the conduct is an explicit (stated) or implicit (implied) term or condition of a person's employment; or

2) submitting to or rejecting the conduct is used as the basis for an employment decision affecting a person; or

3) the conduct unreasonably interferes with a person's work performance or creates an intimidating, hostile or offensive working environment.

Sexual harassment covers a wide range of behaviors, including demanding sexual favors in exchange for an employment benefit, firing someone for refusing to submit to a sexual demand, and repeatedly making sexual jokes and remarks. Although this definition addresses sexual harassment in the workplace, it also applies to harassment in schools and colleges.

Unwelcome Conduct

The definition of illegal sexual harassment requires that the conduct in question be unwelcome. Whether the conduct is unwelcome depends on the point of view of the victim.

It is generally better for a victim to make it clear that offensive conduct is unwelcome. This may stop the harassment before it becomes more serious. Objecting when the conduct occurs is also evidence the conduct is unwelcome and offensive. If a victim does not object to or complain about harassing conduct, however, it can still be found to be unwelcome. The victim may appear to go along with offensive conduct due to fear of reprisals if she complains or refuses to cooperate. On the other hand, if she seems to invite or encourage the conduct, that may show that it was welcome even if she later says the conduct was unwelcome.

EXAMPLE: In a primarily male workplace there may be a lot of sexual joking. Just because a female employee seems to go along with the joking does not mean that it is welcome. However, if she actively initiates sexual jokes that may be evidence that the conduct is not unwelcome.

EXAMPLE: A supervisor had a brief affair with a male employee. The employee appeared to participate in the affair but later said he did so only because he feared he would lose his job if he didn't. This may be unwelcome sexual harassment despite the fact that he went along with it. However, if he actively encouraged the relationship that may show that the supervisor's conduct was not unwelcome.

When a sexual relationship between co-workers ends, continued conduct by one toward the other may become unwelcome sexual harassment. In this situation, the person being harassed has the responsibility to make it clear that any further sexual conduct is unwelcome.

Types of Sexual Harassment

There are two types of unlawful sexual harassment: "Quid pro quo" harassment (which is Latin for "something for something") and "hostile environment" harassment.

Quid Pro Quo Harassment

Quid pro quo harassment occurs when submitting to sexually harassing behavior is a stated or implied condition of an individual's employment or education. It also occurs if submitting or refusing to submit is the basis for an employment or academic decision affecting the individual. The harasser in this type of situation is someone with the authority to make employment or academic decisions about the victim or the power to influence such decisions.

Examples of quid pro quo harassment:

- Requesting sexual favors such as dates or sexual intercourse in exchange for a promotion, raise, or good grades.
- Stating or implying to an applicant that she will be hired if she participates in sexual activity.

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- Stating or implying that a person will be demoted, fired, denied a promotion, pulled off a team, or given a bad grade if she does not submit to a sexual request.

- emoting, firing, denying a promotion, or giving a bad grade to someone for refusing to submit to a sexual advance.

Demands for sexual favors are often subtle and not stated in so many words. An implied demand, however, is treated the same as one expressly stated.

Hostile Environment Harassment

This occurs when unwelcome sexual or other gender-based conduct interferes with an individual's work or school performance. It also occurs if the conduct creates an intimidating, hostile or offensive work or school environment. Generally, this type of harassment requires a pattern of conduct, though a single serious incident (such as unwanted physical touching) could be enough.

In the hostile work environment situation, the harasser can be a supervisor, co-worker, or subordinate of the victim. In the school situation, the harasser can be a teacher, administrator, other staff person, or another student. The harasser can also be a non-employee such as a supplier or customer. In these cases, the employer or school may be liable for the harassment if the organization has sufficient control to stop the outsider's behavior.

Some courts have ruled that if offensive conduct occurs outside the workplace or school, it can still be illegal sexual harassment if it interferes with the victim's performance or creates a hostile environment on the job or in school. For example, if a co-worker makes unwelcome sexual advances off the job, this may result in an offensive work environment.

Examples of hostile environment harassment:

- Making sexually suggestive remarks, gestures, or jokes.

- Making offensive, negative remarks about the victim's gender or physical appearance.

- Using derogatory sexual terms for women such as honey, baby, chick, etc.

- Deliberate touching, pinching, brushing or patting.

- Displaying offensive sexual illustrations.

- Pressuring for dates or sex.

- Describing or asking about personal sexual experiences.
- Hazing, pranks or other intimidating behavior directed toward the victim because of the victim's gender.
- Defaming the reputation of a student in front of the class by implying sexual involvement.
- Sexual assault

What is a Hostile Environment?

In order to be illegal, hostile environment sexual harassment must be so pervasive or severe that the victim's work or school environment becomes hostile, intimidating or offensive. Generally, there must be a pattern of harassment, rather than isolated incidents.

EXAMPLE: A high school teacher tells a sexual joke in class on one occasion making the female students very uncomfortable. A single incident such as this may not be pervasive and severe enough to create an offensive school environment. If, however, the teacher frequently uses sexual jokes to make a point and permits male students to engage in a ritual rating of female students as they leave the room, this may be illegal sexual harassment.

A single incident of severe conduct, particularly unwanted physical touching, however, can poison the victim's environment sufficiently to be illegal sexual harassment.

Reasonable Woman Standard

Whether illegal sexual harassment has occurred may depend on whose perspective is used because conduct that offends one person may not offend another. Generally, the rule is that the harasser's conduct should be evaluated from the perspective of an objective, reasonable person. That is, the harassment creates an offensive environment if a reasonable person under similar circumstances would find it offensive.

Recently, however, courts have viewed the question from the particular victim's perspective. Thus if the victim is a woman, the question is whether a reasonable woman would find the environment offensive. The reason for this rule is that women find sexual conduct in the workplace more threatening and disturbing than do men because women live in greater danger of being raped and sexually assaulted. Thus conduct that would not disturb a man could disturb a woman, and this should be taken into account.

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EXAMPLE: **Male employees at a shipyard filled with posters of nude women might see this as merely the traditional rough and tumble shipyard workplace. Female employees would see this as threatening and demeaning. Under the reasonable woman standard the women's perspective would be taken into account.**

EXAMPLE: **A female employee was repeatedly asked out on dates by a co- worker. After she refused he began to write her love letters that she found to be weird and frightening. Even though a man might not find the conduct threatening, under the reasonable woman standard her perspective would be taken into account.**

Harassing Conduct Need not be Sexual in Nature in Order to be Ileagal

The harasser's conduct need not be explicitly sexual in nature in order to be illegal sexual harassment. Rather, it can be sexual harassment if it is directed toward the other person because of his or her gender.

EXAMPLE: **A woman joins a work crew and is harassed by male employees who hide her tools, refuse to communicate with her, sabotage her work and indicate that they do not want to work with a woman on their crew. This may be illegal sexual harassment if it is occurring because of her gender.**

EXAMPLE: **A teacher in a welding class consistently ignores the one female student in his class, allows the male students to make repeated negative remarks about women and has been heard to say that girls in his class are just wasting their time since they'll probably just get married after graduation. This may be illegal sexual harassment.**

Third Party Sexual Harassment

A third party who is not the target of sexual harassment can make a claim for sexual harassment if that party was hurt by the harassment. This can occur in both quid pro quo or hostile environment harassment situations.

EXAMPLE: **Joan got a job after she submitted to an unwelcome request for sexual relations by the hiring manager. Fran was as qualified as Joan but did not get the job because of the sexual harassment of Joan. Fran could make a sexual harassment claim because she lost a job opportunity due to sexual harassment of the person (Joan) who got the job.**

EXAMPLE: **A supervisor continually touches, hugs and makes sexual remarks to several women at a workplace. Another employee, Tanya is not the target of the harassment but finds the conduct demeaning and offensive. Tanya may be able to make a hostile environment claim.**

It is important to distinguish these situations, however, from ones where no illegal sexual harassment has occurred.

EXAMPLE: **Sandy got a promotion because she was the supervisor's girlfriend. Since Sandy was not sexually harassed, other qualified employees who did not get the job may not have a third party sexual harassment claim.**

Source: Sexual Harassment in Employment and Education, Northwest Women's Law Center, Seattle, Washington. Reprinted with permission of the Northwest Women's Law Center.

NATIONAL WOMEN'S LAW CENTER

FACT SHEET ON SEXUAL HARASSMENT

1. **Sexual harassment takes a variety of forms.**

- Sexual harassment includes:
  - unwelcome sexual advances
  - requests for sexual favors
  - verbal or physical conduct of a sexual nature

  when:
  - submission to or rejection of such conduct is used as the basis for employment decisions or is made a condition of employment (quid pro quo); or
  - such conduct unreasonably interferes with an individual's work performance or creates an intimidating, hostile or offensive work environment (hostile environment).

- More simply, sexual harassment can include any unwelcome attention that focuses on a worker's sex rather than on his or her status and role as an employee.

- Sexual harassment may or may not involve physical contact. Words alone may be sufficient to convey a "quid pro quo" message or to create a hostile work environment.

2. **Sexual harassment is both prevalent and harmful.**

- Sexual harassment is very widespread. It affects women in every industry and at every level of employment. Surveys indicate that roughly forty-five percent of working women have experienced some form of sexual harassment on the job.[1]

- Victims of sexual harassment report feelings of personal anguish, powerlessness, isolation, and decreased job satisfaction. In addition, many experience physical manifestations of emotional harm, including nervousness, nausea, headaches and exhaustion.[2]

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[1] See, e.g., U.S. Merit Systems Protection Board Office of Policy & Evaluation, *Sexual Harassment in the Federal Government: An Update* 16 (1988) (forty-two percent of female federal employees reported having been harassed in 1987).

[2] See Sexual Harassment in Employment Project, *Help Yourself: A Manual for Dealing with Sexual Harassment* 24 (1986) (detailing psychological effects of harassment); Bursten, "Psychiatric Injury in Women's Workplaces," 14 Bull. Am. Acad. Psychiatry L. 245 (1986) (discussing the effects of harassment from psychiatric perspective).

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3. **Sexual Harassment is illegal.**

- In 1986, in Meritor Savings Bank v. Vinson, 477 U.S. 57 (1986), the United States Supreme Court held that, in addition to "quid pro quo" harassment, behavior that creates a hostile work environment constitutes illegal sex discrimination on the basis of sex as defined by title VII.

- In Meritor, Justice Rehnquist emphasized that the touchstone of harassment was whether the sexual behavior was unwelcome, not whether the victim's response (e.g. accepting an invitation to dinner or simply remaining in the work environment) may have been technically voluntary. A victim's willingness to remain in her job despite harassment should not undermine the validity of her claim, nor does it signal that she invited or accepted the harassing behavior.

- More recently, courts have begun to recognize the importance of interpreting the offensive behavior from the woman's perspective. The Ninth Circuit, in Ellison v. Brady, 59 USLW 2455 (1991), noted that "[w]omen who are victims of mild forms of sexual harassment may understandably worry whether a harasser's conduct is merely a prelude to violent sexual assault. Men, who are rarely victims of sexual assault, may view sexual conduct in a vacuum without a full appreciation of the social setting or the underlying threat of violence that a woman may perceive."

4. **Sexual harassment frequently goes unreported.**

- Despite growing awareness of the problem of sexual harassment, most women who experience sexual harassment do not report it.

- Women are reluctant to make allegations of sexual harassment for a number of reasons, including fear of losing their jobs, need for future job references, concern about being labeled a trouble maker, fear that they will be blamed for inviting the behavior, and reluctance to invite scrutiny of their private lives. Instead, many women either endure the harassment or leave their jobs, hoping simply to leave the experience behind them.

DEFINITIONS

Assumption (noun) Something that is taken for granted; something that is accepted as true, even if there is no real proof
Assume (verb)

Coerce (verb) To use force, threats, or intimidation to make a person act a certain way
Coercion (noun)
Coercive (adjective)

Discrimination (noun) Treating someone differently because of his/her gender, race, religion, disability, etc.; not treating the person as an individual; prejudice
Discriminate (verb)

Employee (noun) Someone who works for another person or company (an **employer**) for pay

Explicit (adjective) Clear, direct, straightforward

Exploit (verb) To use someone or something unfairly, for your own purposes, profit, or advantage
Exploitation (noun)
Exploitative (adjective)

Gender (noun) One's sex, male or female

Harass (verb) To annoy, intimidate, frighten, threaten, or bully another person
Harasser (noun)
Harassment (noun)

Implicit (adjective) Not clear, direct, or straightforward; implied or hinted at

Intent (noun) A person's reason for saying or doing something

Legal (adjective) Having to do with the law

Liability (noun) Legal responsibility, legal obligation
Liable (adjective)

Myth (noun) A popular belief, story, or tradition that is used to explain something

Perceive (verb) To become aware of through your senses
Perception (noun)

Physical sexual conduct (noun) Touching another person in a sexual way, usually to show affection; in the case of sexual harassment or sexual violence, this touch is inappropriate and unwanted

Reject (verb) To refuse someone or something
Rejection (noun)

Respect (noun) A special feeling of high regard for someone or something; esteem, consideration, courtesy
Respect (verb)
Respectful (adjective)

Sex object (noun) Someone who is seen only as an object of sexual interest, not as a person

Sex role stereotyping (noun) Expecting men and women to be and act a certain way because of their gender

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Sexism (noun) Discrimination or prejudice based on gender; stereotyping people by gender
Sexist (adjective)

Sexual advances (noun) Come-ons; attempts to lure someone into a sexual act

Sexual discrimination (noun) Discrimination based on gender

Sexual favors (noun) Sexual acts performed in return for a reward, such as a promotion or a higher grade

Sexual harassment (noun) Unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature

Sexual violence (noun) Sexual acts meant to hurt or harm another person physically and emotionally; rape is an act of sexual violence

Stereotype (noun) A mental picture that people in one group have of people in another group; a stereotype assumes that people will have certain abilities, characteristics, behaviors, and values just because they belong to a certain race, gender, religion, social class, family, etc.

Submit (verb) To go along with something because you have to, not because you want to
Submission (noun)

Verbal sexual conduct (noun) Sexual comments about a person's body, clothing, gender, etc.; in the case of sexual harassment or sexual violence, these comments are inappropriate and unwanted

Victim (noun) A person who is injured or otherwise harmed by the actions of another; someone who is oppressed, mistreated, or tricked
Victimize (verb)

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CONTRIBUTING FACTORS IN SEXUAL HARASSMENT

- Social norms encourage it
- Lack of clear communication
- Sex role stereotyping
- Adult attitudes
- Lack of sexual harassment policy, procedure, and training
- Lack of follow-through
- No consequences to harasser
- The victim doesn't report it

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SEXUAL HARASSMENT IN THE SCHOOLS

SURVEY RESULTS IN BRIEF

A self-reporting questionnaire about sexual harassment in the schools was published in the September 1992 issue of **Seventeen** *magazine. Responses to the survey, which was designed and sponsored by the Project on Equal Education Rights of the NOW Legal Defense and Education Fund and the Center for Research on Women at Wellsley College, indicate that:*

- **The most common forms of sexual harassment are:** receiving sexual comments, gestures or looks (reported by 89 percent of the girls and young women); being touched, pinched or grabbed (reported by 83 percent).

- **When sexual harassment occurs, it is not a one-time event:** 39 percent of the girls and young women reported being harassed at school on a daily basis during the last year.

- **Almost two-thirds of the girls told their harassers to stop.** Over a third resisted with physical force.

- **Most girls and young women who are harassed tell someone when they have been harassed.** Approximately three-quarters (76%) of all girls and young women in the sample told at least one person about being harassed in school.

- **Harassment is a public event:** other people are present at over two-thirds of the incidents reported.

- **Sexual harassment happens in all kinds of schools, to all kinds of girls**-- there are few differences by type of school attended or by racial or ethnic background.

- **Girls are most often harassed by fellow students**, but four percent of the girls reported being harassed by teachers, administrators or other school staff.

- **Most harassers are male.**

- **Girls are more likely to do nothing or to walk away**, without telling the harasser to stop, if the harasser is a teacher, administrator or other staff member, than if the harasser is a fellow student.

continued

©Stein, Nan, Marshall, Nancy L., and Tropp, Linda R. (1993). **Secrets in Public: Sexual Harassment in Our Schools.** A report on the results of a **Seventeen** magazine survey. Center for Research on Women, Wellesley College.

SEXUAL HARASSMENT IN THE SCHOOLS

- Schools are less likely to do something about a harassment incident **when the harasser is a teacher.**
- **Even when girls told a teacher or administrator about the harassment,** nothing happened to the harasser in 45 percent of the incidents reported.
- **Only eight percent of the girls reported that their schools** had, and enforced, a policy on sexual harassment.

SEXUAL HARASSMENT IN THE SCHOOLS

WHAT QUESTIONS SHOULD YOU ASK?

When faced with a possible case of sexual harassment or sexual abuse, school leaders ought to be ready to ask the following as they respond:

- ✔ **What legal mandates cover this situation** (federal, state, local) for the child as well as for the school employees and school officials?
- ✔ **If more than one law appears applicable**, what coordination needs to take place?
- ✔ **What non-litigious remedies are available?**
- ✔ **What is likely to happen if no action is taken?** Will the situation continue or are other similar ones likely to occur?
- ✔ **If a child's trust in an adult caretaker has been violated**, what actions need to occur for restitution or for helping that child regain trust?
- ✔ **What implications does the incident have for the school district as a whole** (e.g., need for policy development, policy notification, training, prevention programs)?
- ✔ **If instances of school personnel sexually harassing or sexually abusing children are occurring**, then are other types of sexual harassment also taking place (staff/staff and student/student, for example)?
- ✔ **Do you need outside resources** to help you resolve this problem? If so, how do you identify and obtain them?
- ✔ **What is the educationally sound (as contrasted with the legal) response** that the school district needs to take?

Nan D. Stein and Joyce Kaser

Gender Equity Tip Sheet

Preventing Sexual Harassment in Schools

School district personnel have a responsibility to their students to know the district's sexual harassment policy, to know the procedures for reporting harassment, and to stop it when observed. Schools also have a greater responsibility to foster an environment that is conducive to learning, free from harassment. When schools fail to treat sexual harassment as inappropriate behavior, they fail to fulfill their legal obligation to provide an effective learning environment for all students.

Identifying Harassment

Flirting	Harassment
feels good	feels bad
is reciprocal	is one-sided
is complimenting someone	is degrading someone
equal relationship	power relationship
wanted	unwanted
is flattering	is demeaning

A Simple Test—Before You Act, Ask Yourself the Following:

1. Would I want my behavior to be the subject of a newspaper article or to appear on the evening news?
2. Is there equal power between me and the person with whom I am interacting?
3. Would I behave the same way if my significant other were with me?
4. Would I want someone else to act this way toward my significant other?
5. Is there equal initiation and participation between me and the person with whom I am interacting?

(Adapted from *Sexual Harassment Prevention Workshop Handout*, Minnesota Department of Education)

Activities to Heighten Students' Awareness of Sexual Harassment

- Discuss the difference between harassment and flirting.
- Examine various scenarios to determine what constitutes harassment.
- Ask students to "brainstorm" different forms of harassment.
- Have students participate in role playing exercises.
- If appropriate, encourage students to share any personal experiences with harassment.
- Ask students to discuss myths and stereotypes about men and women that may contribute to sexual harassment in schools and workplaces.

Source: Michigan Center for Career and Technical Education, Michigan State University

25 WAYS TO PREVENT SEXUAL HARASSMENT

1. Train all staff—including teachers, administrators, aides, office staff, and maintenance personnel—in sexual harassment/violence awareness and prevention.
2. Train staff in gender bias awareness and prevention.
3. Offer equal numbers of sports to male and female students, with equal access to facilities, resources, and support.
4. Schedule speakers and offer classes in:
   - sexual harassment/violence awareness and prevention
   - sex role stereotypes
   - the role of the media (TV, movies, music, advertisements) in promoting violence and sex role stereotypes
   - healthy sexuality
   - healthy relationships
   - sexism in our culture and our language
   - women's contributions to American history, culture, etc.
   - conflict resolution
   - communication
   - assertiveness
   - choice making, decision making
   - stress management.
5. Offer student services to victims of sexual harassment, including referrals to agencies, psychologists, and special programs.
6. Involve parents and the community in your efforts to change attitudes and behaviors by:
   - forming a committee to keep the sexual harassment policy current, examine gender-fair curricula, and promote activities including speakers and plays, awards and scholarships based on equality issues or demonstrated respect for others
   - offering seminars on sexual harassment/violence awareness and prevention and related topics
   - discussing the issue at parent-teacher conferences
   - writing articles for local newspapers about what your school or district is doing about sexual harassment
   - sending information home to parents about sexual harassment policy and procedure.
7. Offer support groups to students involved in nontraditional classes and courses of study, and to female students and male students (separately).
8. If your state uses outcome-based education, develop learner outcomes that deal with sexual harassment and violence.
9. Encourage teachers and students to develop projects and units that promote the celebration of diversity.
10. Encourage school groups to sponsor various activities that increase sexual harassment/violence awareness. Examples: poster contests, writing contests, plays, presentations.

11. Preview all student skits prior to production. Work with the students to examine skits for signs of discrimination. Agree ahead of time on consequences for changes made subsequent to review, and follow through on those consequences. (Just as schools would not allow racial slurs in their student skits, they should not allow gender slurs.)
12. Check bathroom walls daily for inappropriate graffiti. Wash and/or paint the walls as needed.
13. Identify a student advocate to accompany victims who choose to file formal complaints.
14. Include the essentials of the sexual harassment policy in the student handbook, written in age-appropriate language; invite students to help you rewrite the policy for this purpose.
15. Offer recognition and/or awards to students and staff who serve as positive role models by treating people with dignity, respect, and equity.
16. Survey students and staff to learn the specifics about sexual harassment in your school. (Use the Sexual Harassment Survey on pages 134–138.)
17. Survey students and staff for suggestions on making the school environment safer, healthier, and more open for everyone.
18. Facilitate a peer helper program. (Students are trained in basic counseling techniques, then made available to kids who need to talk, but don't want to talk to adults.)
19. Train older students to teach younger students about sexual harassment/violence.
20. Encourage students to speak up if they are victimized by sexual harassment, or if they know of other students who are victimized.
21. Investigate and take appropriate action if you observe sexual harassment, or if you are made aware of it. Don't wait for victims to report the incidents or file formal complaints. Remember that many never do report or complain. Take a proactive position.
22. Use gender-inclusive language in all classes and activities.
23. Make use of the "teachable moment." For example, when an incident of sexual harassment occurs, take this opportunity to teach your class or school about sexual harassment and sexual violence, and to communicate that these behaviors are illegal and are not tolerated.
24. Develop a committee to tackle these issues and form a plan of action (including who, what, when, where, and how) to make the school environment healthy and harassment-free. If possible, include parents and community members.
25. A year following the implementation of your anti-harassment plan, evaluate your efforts and use the results to establish new goals and objectives for the next year.

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SEXUAL HARASSMENT IN THE SCHOOLS

INVESTIGATING A COMPLAINT

When investigating a sexual harassment complaint, educators should be sure to:

✔ **Document everything.** Record every aspect of the investigation with an appropriate memo to the file prepared contemporaneously with the events.

✔ **Be diligent in the investigation.** Sexual harassment/abuse by a school employee frequently involves multiple incidents and multiple victims over a period of years. Look for a pattern and previous witnesses.

✔ **Never discourage a student or employee complaint.** Do not respond with words such as "It will just be your word against his," or "Do you know what could happen to Mr. X?" Questions should be directed at obtaining trust, not the consequences.

✔ **Don't be influenced by the reputation of a complaining student or whether the student may have "invited" the attention.** These factors are absolutely irrelevant and will provide no defense for a failure to act upon the requirement to investigate the allegation, or to report it to the proper authorities.

✔ Don't rely on potentially misplaced **loyalty** to staff who might be accused or implicated in the charges.

✔ **Don't necessarily** end the inquiry upon the retraction of a student or **employee's prior statement.** This is an extremely sensitive area, one where students and employees alike are frequently embarrassed and humiliated and well aware of the possible consequences of their allegations. A denial or recanting may be an avoidance mechanism or an effect of retaliation.

✔ **Little evidence suggests students fabricate allegations** of sexual misconduct by school employees or peers for ulterior motives.

✔ **Under existing law, school administrators can be held personally liable** for the sexual harassment/abuse by an employee they supervise. The same applies for giving negligent references to the next employer or this employee when you know of past behavior as a sexual harasser/child abuser.

continued

Nan D. Stein

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✔ **You are not the district attorney nor the school board attorney nor an investigator empowered by a judge.** Turn all information over to the school superintendent/school board. But by the same token, if it is your sense the school system is ignoring or not treating seriously you allegations (or those of a minor's on whose behalf you are acting), it is incumbent upon you to report these allegations to other authorities, such as the child welfare and protection agency of the state or the district/county attorney.

Sample Feedback Sheet

I came expecting...	I got...
I value...	I want next...

NYS Occupational Equity Center

STAFF DEVELOPMENT EVALUATION FORM

Participant Reaction Sheet

Please fill out the following questions by giving your frank opinions and reactions to this staff development program. Do not sign your name.

Female ☐ Male ☐
Job Title: ____________________
Program conducted at: ____________________ Date: ____________

Have you ever attended a program similar to this? Yes ☐ No ☐

Inservice Content Evaluation

	Not New						Very New	
1. How new were the topics or materials to you?	1	2	3	4	5	6	7	
	Very Limited					Of high Value		
2. How relevant or useful was the inservice to your work—did it meet your needs?	1	2	3	4	5	6	7	
	Limited					Effective		
3. How effective was the presentation in getting ideas across to you?	1	2	3	4	5	6	7	

4. Was there enough opportunity for questions and discussion?
Too much ☐ All that was needed ☐ Should have been more ☐

5. Do you feel the ideas and concepts can be immediately integrated into your work?

6. What was the most helpful for you?

7. What was the least helpful for you?

	Poor					Excellent	
8. How would you rate the inservice overall?	1	2	3	4	5	6	7

COURSE EVALUATION

Please return your completed survey by ______________________________
DATE

Your gender is (circle one): MALE FEMALE

What grade are you in? ______________

Please answer these questions about SEXUAL HARASSMENT AND TEENS.

1. The course was:

_ too long _ too short _ just right

2. The amount of information was:

_ too much _ too little _ just right

3. The pace (speed) was:

_ too slow _ too fast _ just right

4. For each statement:

Circle 5 if you *strongly agree*
Circle 3 if you *agree*
Circle 1 if you *strongly disagree.*

	Strongly agree	**Agree**	**Strongly disagree**
• I learned a lot I didn't know before.	5	3	1
• The course held my interest.	5	3	1
• Things I learned are useful to my life now.	5	3	1
• Things I learned will be useful to my life in the future.	5	3	1
• The course is helping our school now.	5	3	1
• The course will help our school in the future.	5	3	1
• The teacher(s) was prepared.	5	3	1
• I could understand the information being presented.	5	3	1
• The transparencies and handouts were interesting and helpful.	5	3	1
• The activities were interesting and helpful.	5	3	1

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5. Complete these sentences:

- The most helpful activity was ______________________________
- The most important activity was ______________________________
- The most eye-opening activity was ______________________________
- My least favorite activity was ______________________________

  Why was this your least favorite activity? ______________________________

  ____

6. Have your beliefs about male and female roles, relationships, etc. changed because of this course? __ YES __ NO

Please explain: ____

____

7. What improvements would you make to this course?

____

____

8. What would you like your school to do next about sexual harassment? Check as many as apply:

__ Offer support groups for victims

__ Offer groups for harassers to make them more aware of how their behavior affects other people

__ Require all students, teachers, staff, and parents to learn about sexual harassment

__ Make sure victims know about community resources that can help them

9. Would you recommend this course to someone else? __ YES __ NO

Explain: ____

____

10. Give an example of something you plan to change in your own life as a result of this course.

____

____

11. Give this course a final grade from 1 to 5, with 5 being the highest grade. Circle one:

5 4 3 2 1

Thank you for completing this evaluation.

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Bibliographies

Staff Development Bibliography......................117

Sexual Harassment Bibliography.....................121

Sexual Harassment in
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Note:
All bibliographies are alphabetically ordered by **title**.

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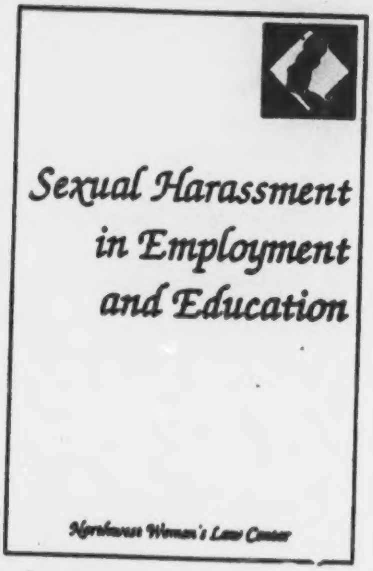
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The Northwest Women's Law Center has available for sale a practical guide to understanding, preventing and resolving sexual harassment problems in the workplace and in schools. It is designed to be used by a wide audience:

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Toward a Challenging Future

A Practitioner's Guide for Student Career Exploration in New York State

Part Four: Curriculum Development 4

4

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Introduction

About Curriculum Development

Curriculum development includes seeking to attract and meet the needs of both females and males.

Successfully infusing equity into every aspect of the curriculum requires that it become an all encompassing theme and not an add-on unit or activity. The Wisconsin Model for Sex Equity offers four stages that are necessary when attempting to ensure that a particular curriculum supports the goals of educational equity.

Stage 1 - Complying with the letter of the law.
Stage 2 - Neutralizing stereotypes and bias in existing instructional materials.
Stage 3 - Revising an existing curriculum and seeking to attract and meet the needs of both females and males.
Stage 4 - Reconstructing the curriculum and seeking to attract and meet the needs of both females and males.

This section has materials that will allow you to complete these stages. It consists of guidelines for developing and implementing a gender-fair curriculum, curriculum checklists, profiles of an equitable classroom, and classroom strategies.

FOUNDATIONS FOR
THE CURRICULUM FRAMEWORKS

New York State's educational system must change to meet the demands of the twenty-first century. Students need to be prepared for a world that is rapidly changing, rich in information, competitive yet interdependent, technologically complex, and culturally diverse.

The standards in the frameworks apply to all students, regardless of their experiential background, capabilities, developmental and learning differences, interests, or ambitions.

A *New Compact for Learning,* approved in 1991 by the Board of Regents, provides a rationale for systematic change and a vision for New York State's educational reform. Central to the vision described in the *Compact* is local development of curriculum, instruction, and assessment that results in student achievement of specific standards.

The New York State Curriculum and Assessment Council has defined *content standards* as "the knowledge, skills, and understandings that individuals can and do habitually demonstrate over time as a consequence of instruction and experience." The approach adopted in the Compact calls for educators and communities to have more flexibility than ever before in deciding how to help all students achieve these standards.

A *curriculum framework* is a broad description of the principles, topics, and modes of inquiry or performance in a discipline which provides the basic structure of ideas upon which a curriculum is based. A stepping stone between standards and curriculum. The curriculum frameworks provides direction for schools and districts as they construct a curriculum that addresses the needs of their students. Local planners have the flexibility to design interdisciplinary work; to schedule the work of students and staff and to organize the school day, week, and year; to use a variety of strategies to build knowledge and skills, varying with the learner, but directed purposefully toward achieving the desired results of learning.

As part of the implementation of A New Compact for Learning, in 1991 the Board of Regents revised the Regents Goals for Elementary, Middle, and Secondary School students. The updated goals have an increased emphasis on the application of information, on the varied roles of adults and family members in society, and on critical employment skills. The responsibility for achieving the goals is shared by the State, local community, school, family, and individual student. The Regents Goals are the foundation for the Curriculum Frameworks. They are summarized here for your reference.

Each student will develop the ability to understand, appreciate, and cooperate with people of different race, sex, ability, cultural heritage, national origin, religion, and political, economic, and social background, and to understand and appreciate their values, beliefs, and attitudes.

Goal 1: Each student will master communication and computation skills as a foundation for developing life-long skills.

Goal 2: Each student will be able to apply methods of inquiry and knowledge learned through the listed disciplines and use the methods and knowledge in interdisciplinary applications.

Goal 3: Each student will acquire knowledge, understanding, and appreciation of the artistic, cultural, and intellectual accomplishments of civilization, and develop the skills to express personal artistic talents.

Goal 4: Each student will acquire and be able to apply knowledge about political, economic, and social institutions and procedures in this country and other countries.

Goal 5: Each student will respect and practice civic values and acquire and use the skills, knowledge, understanding, and attitudes necessary to participate in democratic self-government.

Goal 6: *Each student will develop the ability to understand, appreciate, and cooperate with people of different race, sex, ability, cultural heritage, national origin, religion, and political, economic, and social background, and to understand and appreciate their values, beliefs, and attitudes.*

Goal 7: Each student will acquire the knowledge of the ecological consequences of choices in the use of the environment and natural resources.

Goal 8: Each student will be prepared to enter upon post-secondary education and/or career-level employment at graduation for high school.
Goal 9: Each student will develop the knowledge, skills, and attitudes which enhance personal life management, promote positive parenting skills, and will enable functioning effectively in a democratic society.
Goal 10: Each student will develop a commitment to lifetime learning an constructive use of such learning, with the capacity for undertaking new studies, synthesizing new knowledge and experience with the known, refining the ability to judge, and applying skills needed to take ethical advantage of technological advances.

A New Compact for Learning

A New Compact for Learning promotes partnerships between schools and the community in order to help all students attain the Regents Goals.

A New Compact for Learning represents a reconceptualization of education in New York State. It promotes partnerships between schools and the community in order to help all students attain the Regents Goals. The Compact is based on six key principles:

1. All children can learn
2. Focus on results
3. Aim for mastery
4. Provide the means
5. Provide authority with accountability
6. Reward success and remedy failure

The *Compact* redefines the roles and responsibilities of the State and local school districts as they relate to curriculum, instruction, and assessment. The Frameworks provide a model for designing curricula that better fit the needs of today's students and our modern technological society.

Excerpt from New York State Curriculum Frameworks for Math, Science and Technology.

TIPS AND CAUTIONS

When Developing and Implementing Gender Fair Curriculum

- Equity can be included informally (for example, teacher/student talks) as well as formally (for example, work sheets, assignments) into the curriculum.
- The first inclination may be to "add-on" equity activities; however it is best to infuse and integrate equity into the curriculum.
- If the existing curriculum is viewed as being inflexible, teachers may perceive equity as something to be added on (one more thing to teach) rather than infused.
- While beginning efforts - such as evaluating texts for bias - are often easier, do not stop there; it is building over time that works most effectively.
- Do not rely on textbook companies that claim they have reviewed their books for bias and stereotyping. Develop and use your own criteria and/or the criteria required by your district or state.
- Be aware that some curricular areas, such as family and consumer education, naturally lend themselves to equity connections. In areas where the connection may be less clear, such as in mathematics, teachers can infuse equity by modifying their classroom examples and through equitable student-teacher interaction.
- Infusing an equity program throughout K-12 curriculum is most effective as it is reinforced at all grade levels.
- Infusing the equity program into the curriculum is a superb opportunity to address equity and to achieve "excellence in education".
- Be aware of student employment, placement, work experience and equity issues.

Reprinted/excerpted with permission from Bitters, Barbara A., & Foxwell, Susan, Wisconsin Model for Sex Equity in Career and Vocational Education, Wisconsin Department of Public Instruction, 125 South Webster Street, Madison, WI 53702, (800) 243-8782.

QUESTIONS FOR CREATING A GENDER-SENSITIVE CURRICULUM

1. Whose experience does this concept or content reflect?

2. If this material reflects the experience of the dominant (white, male) group, how would other groups (non-white, female) view it differently?

3. What customs, activities, or traditions of women could be looked at as acts of oppression or acts of resistance in the context of this material?

4. What experiences can we provide, for students, to make them aware of differences, to celebrate differences and to encourage community?

5. Are the materials, activities or projects a result of careful consideration and understanding of women, or are they superficial appropriations of easily imitated words or gestures?

6. Does this material, activity, or project romanticize women's culture by implying that women are better than men? Which women? Which men?

7. What does this material reveal to us about culturally created viewpoints?

8. What oppositional viewpoint do we hope to encourage?

9. How do the learning experiences we have selected support the process of developing critical thinking?

Source: Workshop session at the NYS Women's Studies Association Conference, Plattsburgh, 4/1/95 by Prism Collective, Webster, New York.

Curriculum

Content

LOOK FOR:

☐ **Inclusion of gender equity as a criterion for assessing or revising any curriculum.** Are women's experiences and contributions included? Are gender issues a part of the curricula? Are all programs, courses, and classes conducted without gender differentiation in assignments, materials, services, or other treatment?

☐ **Dissemination of ideas promoting gender fair curricula.** When one department, school, or subject area revises content to be more inclusive and less sexist, are there resources available and processes in place to facilitate their efforts? Do curriculum improvement teams work in isolation of one another or are they sharing information about bias-free resources?

☐ **Initiatives** undertaken to equalize opportunities in all content areas. Are gender equity projects assessed for their effectiveness?

☐ **Use of special resources** by teachers, such as the National Women's History Project, and the Women's Educational Equity Act Publication Center. (See Resources)

☐ **Participation and success rates of girls** equal to those of boys in math, science, and technology.

☐ **Leadership skills development** as a part of the curriculum. Are diverse styles of leadership acknowledged?

☐ **Recognition of the need for curriculum content that provides positive female role models, particularly for adolescent girls.** Are teachers aware of the drop in self-esteem in young girls as shown in recent reports by the American Association of University Women and other organizations? (See Resources)

☐ **Inclusion of life skills and sex-role stereotyping** information in the established curriculum. Is information about sexual harassment included in curricular content K-12?

☐ **Student handbooks** which make clear that all courses are open to students of both sexes.

BEST COPY AVAILABL

Organization

LOOK FOR:

- ☐ **Equitable access and participation by gender in the various curriculum areas** such as vocational education, college prep, the gifted and talented programs, and Advanced Placement classes. What is being done to recruit and retain a diversity of students?
- ☐ **Placement and enrollment rates in special or remedial programs.** What actions are being taken to reduce sex segregation in these programs? Are there equal opportunities provided for individual growth and development?
- ☐ **Careful monitoring of enrollment trends** in elective courses traditionally dominated by one sex (e.g., boys in advanced mathematics, girls in humanities and foreign languages). Are 20% or more students of the nontraditional sex in the same class, or are there just 1 or 2 "lone-rangers"? Are criteria and procedures for the assignment or selection of students for programs, courses, or classes developed and applied without regard to sex?
- ☐ **Bias-free course titles and descriptions.**
- ☐ **Evaluation strategies and training** for faculty to become more sensitized to their different behaviors toward boys and girls.

Source: Take A Good Look - Gender Equity Handbook for Administrators. NYAWA, 1995.

Instructional Resources

LOOK FOR:

☐ **The composition of Instructional Resources selection committees.** Are they gender balanced?

☐ **The perspective** that is emphasized by the committee members. Do they represent the total population of the district? Do they have an understanding of diversity and gender balance?

☐ **The evaluation instruments.** Do they include equity criteria? Are the committee members asked to judge gender content as well as other variables?

☐ **Extensive review of materials** so that the selections reflect the multicultural makeup of the community and/or the world.

☐ **Elimination of stereotypes** in selections. Are women physically active, strong in leadership roles, and in a variety of professions? Are men shown as caregivers, nurturing fathers, working *for* women and side by side with women?

☐ **Realistic and accurate selections** that reflect contemporary life, including the variety of "nuclear" families and changes in the workplace?

☐ **The copyright date.** Publishers are beginning to reduce bias; the more current the publication, the more likely it is to be inclusive and fair.

☐ **Language** that uses gender neutral words. Is **he** the predominant reference?

☐ **Illustrations.** Are individuals and diverse groups represented accurately, in non-traditional roles, working cooperatively, and in leadership roles?

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[illegible]

LOOK FOR:

- ☐ **The integration of histories, contributions, or concerns of certain groups** rather than isolation of information to separate chapters or to the end of units of study as if they are not fully appropriate for general study and consideration.

- ☐ **Terminology that is bias-free** and current, rather than terms such as "head of household," "broken family" and "man's work" that reflect a bias about the changing roles of men and women.

[illegible]

LOOK FOR:

- ☐ **The main characters** in the books. Are they men/women? What are they doing?

- ☐ **Women referenced** in science and/or social studies texts. When women are cited, are their names familiar to students? Are their stories interwoven into the texts or highlighted as if they are notable exceptions?

- ☐ **Literature collections that demonstrate women taking risks and taking the lead.** Are girls informed of women leaders in history, and encouraged to model the main characters? Are boys encouraged to appreciate the contributions of women?

- ☐ **Bulletin boards and displays** that reflect equity in student samples, nontraditional roles and activities. Are the mascots, emblems, and team names free from gender bias? Do they belong to everyone?

- ☐ **Types of magazines** available and the messages that they send students via articles and advertising. Do students have a chance to analyze and discuss?

LOOK FOR:

- ☐ **Complete information from a variety of resources** to assure that current resources and classroom texts provide good role models for both boys and girls.
- ☐ **A range of emotions** portrayed by both boys and girls in all instructional resources. Do both genders show fear, anger, aggression, and sensitivity?
- ☐ **Reference books, workbooks, and word problems** that include girls and women in nonstereotyped roles. Are they featured as participants at all levels of science and technology?
- ☐ **Biographies , literature anthologies,** and other resources that are unbiased and depict the contributions of women.
- ☐ **Video collections featuring important women.** Who does the speaking and what is the substance? Do they include strong and positive female role models or are women portrayed as weak, vain or malicious?
- ☐ **Historical references** that include the contributions of women.
- ☐ **Male and female characters who are self-reliant,** independent, and problem-solvers. Are girls generally rescued in the stories? Do boys always have to be strong and brave?
- ☐ **Families depicted in stories that are diverse and realistic.** What is the percentage of single-parent families in the school? Do the books available to students reflect the demographics of the school?
- ☐ **Instructional resources that depict behaviors that are applicable to a variety of tasks, regardless of gender.** For example, *physical strength* (lifting furniture, lifting children); *working outside* (construction, landscaping); *mechanics* (operate electric saw, operate sewing machine).

LOOK FOR:

- ☐ **Diversity in selection of role models as speakers.** Are the DARE officers women?
- ☐ **Field trip sites.** Do students learn about women leaders on these trips? Do they see women in technical careers?
- ☐ **Community speeches by successful local women** to see if they are regularly invited to school.
- ☐ **Assembly content** to see if nontraditional themes are considered. Are both genders encouraged to participate? Does the planning for all school events reflect the diversity of the school community? Does the content promote equity?
- ☐ **Gifted and talented participation.** Do the enrollments reflect the diversity of the population? Do the males and females experience similar opportunities? In special events such as Odyssey of the Mind, are girls encouraged to participate at all levels and in a variety of activities?

Computers

LOOK FOR:

☐ **Equal access to computers for all students.** Do girls tend to let the boys have access first and longest? Do they watch instead of sit at the keyboard? Develop methods that allow even numbers of boys and girls to use the computers at any one time. Some schools have established Computer Time for girls because boys had been dominating the computer.

☐ **Computer software** that is gender neutral. Are girls encouraged to conduct a variety of activities? Have topics been selected that appeal to girls so that they can become comfortable on the computer?

☐ **Computer activities** that will enable the girls to do something that they consider practical and useful. Allow them to utilize applications that launch imaginary businesses, create blueprints, or design publications.

☐ **Computer games** that encourage girls to utilize risk-taking, planning, problem solving, and math and science skills.

☐ **Membership in the computer club and advanced computer classes.** Have the girls been encouraged to participate? Have they been asked to invite a friend to provide support?

☐ **Look for computer magazine articles and illustrations that are gender-balanced.** Only 20% of the pictures in four large-circulation computer magazines for adults were of women or girls and most of those women were not even shown at a computer. Note the salespeople, technical staff, and attendees at computer trade fairs, and encourage girls to change the picture.

☐ **New multimedia bases featuring notable women.** New databases may include oral histories, literature and music and women. Are boys encouraged to try these programs, too?

☐ **Computer education staff** that reflects that both men and women can have computer skills.

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Source: Take A Good Look - Gender Equity Handbook for Administrators. NYAWA, 1995.

Gender Equity Tip Sheet

Curriculum Checklist

"The formal school curriculum must include the experiences of women and men from all walks of life. Girls and boys must see themselves reflected and valued in the materials they study."

—*"How Schools Shortchange Girls," 1992 AAUW Report*

Guidelines for Detecting Bias

- **Invisibility/Exclusion** — Females and minority ethnic groups are often omitted from classroom materials, painting a picture in students' minds that only white males participate in these occupations or activities. Males also may be excluded from certain materials, such as parenting or home management texts.
- **Stereotyping** — Do your materials portray males, females, people with disabilities, or ethnic groups in narrowly defined roles?
- **Imbalance/Selectivity** — Make sure textbooks do not ignore certain points of view. For example, "Columbus discovered American" denies the fact that the land was already inhabited and ignores Native American perspectives.
- **Unreality** — Materials often present history unrealistically. Do they gloss over controversy or avoid discussion of prejudice or discrimination?
- **Fragmentation/Isolation** — Placing issues concerning women or ethnic groups separate from the text's main body, treats them as afterthoughts and gives them less value.
- **Linguistic Bias** — Using words like "he" or "mailman" generically may not seem like a big deal, but they perpetuate the image that only men do these jobs. By changing our language, we can change perceptions.

Things to Look For

Use this checklist to determine the degree in which sex bias is present in the curriculum.

1. Are occupations shown open to all. Are females and males portrayed in nontraditional careers?
2. Are sex-free titles used, as indicated in the current *Dictionary of Occupational Titles*?
3. Are females and males portrayed in the same number of active and passive roles?
4. Are various races and ethnic groups presented throughout in a balanced or representative fashion?
5. Do the same number of females and males appear throughout the materials? Are they shown to have all human traits?
6. Are gender-free, plural pronouns used? Is there an equal balance of gender-specific, singular pronouns? Are gender-free nouns substituted for gender-specific pronouns?
7. Are both minority and non-minority females and males pictured equally in varied levels of occupational status and responsibility?
8. Do illustrations of people include a variety of body types along with evidence of disabilities?
9. Is written reference made to physical appearance only when there is a legitimate purpose for the reference?

Sources: GESA Facilitator Handbook; Idaho's Vocational Education Equity Perspective; and Wisconsin Department of Public Information materials.

Categories of Gender Bias in Curriculum Materials

Sex-biased reading material distorts students' reality.

Fair materials promote fairness.

Equitable learning materials encourage leaning.

Recall and comprehension increase when both genders are included

Discuss the following categories of gender bias with your class and involve them in evaluating texts, films and other teaching materials for gender fairness.

Invisibility

Women simply aren't included in many, many texts and teaching materials. Most professionals teaching today were educated with texts that gave no mention of women as active participants in history.

Unreality

False representations of the "typical" family cast women in limited roles as personal service providers to their families.

Stereotyping

Women may be mentioned only in cliché context such as the suffrage movement or "women's liberation" activities of the 1960's and early 70's.

Fragmentation

Women are often added to text as an afterthought. This is illustrated in the use of add-on text boxes under headings such as "Notable women." Text publishers sometimes add on photos depicting women without changing the text copy.

Source: Lynne Sheren, Gender Equity Program, Orange County Community College.

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Sample Curricular Strategy Activity

Sex Equity in Curriculum Materials

Adapted from *A Guide to Curriculum Planning in Technology Education*, Madison, WI: Wisconsin Department of Public Instruction, 1988, p. 124-125.

Directions: Use this checklist to determine the degree to which sex bias is present in curriculum materials. These questions apply to the language and visuals used in both print and nonprint materials. If you answer "no" in any category, the material is biased; you should replace the material if possible or develop handouts to supplement the material and discuss the bias with your students. Before purchasing new material, use this checklist to determine the appropriateness of the purchase.

		Yes	No	N/A*
1.	Are occupations shown open to all?	☐	☐	☐
2.	Are sex-free titles used, as indicated in the current *Dictionary of Occupational Titles*?	☐	☐	☐
3.	Are females and males depicted in occupations currently dominated by the other sex (nontraditional occupations)?	☐	☐	☐
4.	Are females and males portrayed in both active and passive roles throughout in approximately the same numbers?	☐	☐	☐
5.	Are various races and ethnic groups presented throughout in a balanced or representative fashion?	☐	☐	☐
6.	Are females and males shown to have all human traits?	☐	☐	☐
7.	Do females and males appear in approximately the same number throughout the materials?	☐	☐	☐
8.	Are females and males pictured performing a variety of home tasks that are not necessarily traditional for their sex?	☐	☐	☐
9.	Are gender-free, plural pronouns used? Is there an equal balance of gender-specific, singular pronouns? Are gender-free nouns substituted for gender-specific pronouns?	☐	☐	☐
10.	Are both minority and nonminority females and males pictured equally in varied levels of occupational status and responsibility?	☐	☐	☐
11.	Do illustrations of people include a variety of body types along with evidence of handicaps/disabilities?	☐	☐	☐
12.	Is written reference made to physical appearance only when there is a legitimate purpose for the reference?	☐	☐	☐
13.	After reviewing this material, do you come away with a sense that females and males of various ethnic and racial backgrounds, some with handicaps, are involved in a variety of occupations, with a variety of responsibilities, and that opportunities are not limited on the basis of gender, race, or handicaps?	☐	☐	☐

14. Comments/recommendations

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* N/A = Not Applicable

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Forms of Bias/Quick Check*

Adapted from *A Guide to Curriculum Planning*, Madison, WI: Wisconsin Department of Public Instruction, 1985, p. 71.

	Check Below				
	Always	Often	Sometimes	Never	N/A**
Expectations. I have the same behavioral and achievement expectations for males as for females.	☐	☐	☐	☐	☐
Duties. I assign females and males to duties and responsibilities on the basis of ability rather than gender.	☐	☐	☐	☐	☐
Language. I use nonsexist language; for example, I do not refer to all doctors or lawyers as "he," or all nurses or secretaries as "she."	☐	☐	☐	☐	☐
Attitude. I take the idea of equality seriously; for example, I do not put down males or females or joke about their abilities, roles, or ethnic backgrounds.	☐	☐	☐	☐	☐
Environment. All bulletin boards and visual materials are nonsexist and nonracist, showing men and women in a variety of roles that reflect the many interests of both.	☐	☐	☐	☐	☐
Curriculum. I ensure that school curriculum is nonsexist; for example, I plan for a curriculum that a. addresses the needs and interests of both girls and boys; b. recognizes the contributions of both sexes; c. provides for the equal treatment of both sexes in all subject areas; and d. helps boys and girls explore the wide range of roles and career options available to them.	☐	☐	☐	☐	☐

Mark the continuum: ____

Actively and consistently sex equitable	Need some improvement	Need much improvement

Consider your rating. List something specific you could do to help achieve sex equity in your area(s) of responsibility.

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* Items adapted from surveys developed by E.I. Newcombe and published in *The Tredyffrin/Easttown Program Stage One Manual: Preparing for Change*. Washington, DC: Women's Educational Equity Act Program, U.S. Department of Education, 1979.

** N/A = Not Applicable

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ENVIRONMENTAL IMPACT STATEMENT

Rating Scale

Area of Concern: Sex Equity in the School Environment
Impact on Environment Scoring: 2 points for each area of full compliance
1 point for each area of partial compliance
0 points for each area of noncompliance

Points

____ A. **Distribution of Natural Resources:** Expectations for girls and boys are equal. Talents, skills, and interests of all individuals are tapped equitably.

____ B. **Traffic Patterns:** All procedures and patterns including seating, lines, activity areas, and academic and athletic groupings are integrated, sex-fair, and race-fair.

____ C. **Noise Control:** girls and boys are talked to in the same manner and terms and are held to the same standards.

____ D. **Air Quality:** The "air is cleared" the same way for all students. Discipline and penalties are equal. Acceptable behavior, language, and dress are nondiscriminatory.

____ E. **Materials:** All instructional materials are non-biased regarding sex, race, and disability and reflect the diverse abilities, activities, and options of these groups.

____ F. **Balance of Elements:** No imbalance or selectivity exists in opportunities for boys and girls to perform classroom tasks, e.g., running audiovisual equipment, washing utensils.

____ G. **Landscape:** Bulletin boards, illustrations, and other visual materials show females and males of varied racial, ethnic, age, and disability groups in a variety of roles.

____ H. **Linguistic Pollution:** Verbal and nonverbal language and cues avoid stereotyped generalizations and demonstrate non-biased models, e.g., firefighter, spouse, humanity.

____ I. **Access:** Students have equal access to resources, facilities, and placement, e.g., courses, extracurricular activities.

____ J. **Pollution Control Efforts:** Affirmative action is undertaken regularly to compensate for (filter out) the effects of past discrimination in particular areas, e.g., lack of experience/exposure to mechanical or nurturing skills.

ENVIRONMENT RATING

0-10 Points:	**Serious Polluter** – May require federal lawsuit.
11-15 Points:	**Moderate Offender** – Keep improving! Submit new Environmental Impact Statement in 60 days.
16-20 Points:	**Conservationist** – Pass environmental quality control. Receive equity commendation.

Source by Permission: Developed by Jill Moss Greenburg, Mid Atlantic Equity Center, Maryland

THE EQUITY
CENTER

Equity Strategies – Month-by-Month

In an ideal world, we would all be able to find time, energy and funding to implement major gender equity programs in our districts. Most of us, however, find ourselves operating close to overload. We have to pick and choose among the many demands on our time.

The following strategies suggest ways to integrate equity concerns into existing activities and responsibilities, without taking on major new commitments. The format follows a typical school calendar, pinpointing areas where a little extra effort can yield significant results. We suggest that you write some of these or similar suggestions on your calendar or plan book before the start of the school year. As the year unfolds, they will serve as a reminder to promote equity within your district.

SEPTEMBER

- As you introduce new textbooks to students, help them evaluate the books for stereotyping.

- Be clear as you assign classroom jobs and responsibilities that all students are expected to share in all duties.

- Avoid using gender as the basis for seating, lining up, work assignment, etc.

- Announce opportunities for extracurricular involvement in a way that encourages participation by all.

- Discuss the importance of sports for all students.

- If one of your classes is predominantly filled by students of one gender, help all students become comfortable in that environment.

- Consider any request for a schedule change to see if it might be motivated by the students feeling of isolation in a class dominated by the other gender.

- Present student elections as an opportunity for both boys and girls to demonstrate leadership.

- At the September faculty meeting, let others know that New York State educators may borrow print and audiovisual resources free of charge from the **Resource Center**. Topics and borrowing procedures are listed in every issue of the **VOICE** newsletter which should be available in all school libraries.

continued

OCTOBER

- As decisions need to be made about college, training, and employment opportunities, encourage all students to make those decisions based on interests and ability rather than gender.

- When you need adults to help with field trips, extend invitations to include fathers, mothers, relatives, guardians, grandparents, etc. Plan far enough in advance so that people can arrange for time off from work.

- Be on the lookout for parents/guardians who have nontraditional jobs or interests that they can share with students.

- In junior high interest and aptitude testing, inquire about the kind of test used and the procedure for past-test counseling.

- If you are invited to submit information for publication in a district or parent newsletter, submit articles on equity-related topics such as home and career skills, environment trends,etc. (If you don't have time to write your own articles, check through back issues of **VOICE** for appropriate articles which could be reprinted.)

NOVEMBER

- If your district does not provide child care during parent/teacher conference, ask your principal to arrange this through a high school service group or a parent organization. Evening appointments should be available to accommodate working parents.

- Whenever **Parents As Reading Partners** or other special programs are done at the school, be sensitive to the demands on the time of single parents and parents working outside the home.

DECEMBER

- Budget requests should reflect the need for equal opportunity for boys and girls, and for replacement of stereotyped material.

- Prepare for occupational education center recruitment by seeking out both boys and girls who might benefit from this opportunity.

- Holiday concerts, dances, etc., should be planned by both boys and girls. Roles in these events should be assigned without regard to gender.

- Family-related issues can be especially problematic during the holidays. Let children choose the people who will receive the presents they make (rather than making presents specifically for mothers, fathers). Make it easy for them to invite a grandparent or adult friend to holiday activities. Be careful not to assume that parents will be attending.

continued

JANUARY

- When ordering textbooks, remind administration that gender-biased textbooks are as much out of date as old science books.
- Course descriptions which appear in guidance booklets can be very powerful. Check titles and descriptions to avoid phrases like" Bachelor Living," and include phrases like "Life Skills".
- College decisions are critical now, so students need extra support in their selection. (Review math enrollments for girls with college math potential).

FEBRUARY

- Next year's schedule should be arranged to provide as many options as possible for both female and male students.
- Observe **Black History Month** as an excellent vehicle for studying equity issues. Be sure to include study of black women as well as black men.
- Encourage all students to participate in winter sports, especially in lifetime sports.
- Make **National Vocational Education Week,** which is observed the first week in February, an opportunity to explore nontraditional employment opportunities.

MARCH

- At course selection time, students need constant input about the home and career skills they will all need as adults. They also need reminders about the importance of mathematics for all.
- **Women's History Week** can be an event for teachers in your district each year. Materials and activities should concentrate on ways to integrate women's contributions throughout the curriculum.
- Ask the career fair committee at your school to arrange as much involvement by nontraditional workers as possible.
- As new staffing opportunities come up, consider moving into nontraditional fields and administration.

APRIL

- Suggest that planners for junior high orientation make use of student speakers who are in fields not traditional for their sex.
- Present summer employment and academic opportunities in a way that minimizes gender expectations.

continued

- Distribute information about the **Achieving Equity in Education** graduate course at the April faculty meeting.

MAY

- Check Kindergarten screening process for possible bias.

- Examine the final school budget proposal for equitable distribution of funds for male and female dominated programs.

- End-of-year honors and scholarships should be awarded to the top student who qualifies, not to the top girl or boy (Title IX ruling).

JUNE

- If you have some flexible time with your students during the last few days of school, it can be put to good use with activities designed to examine equity issues. (Contact the **Resource Center** for books with excellent activity suggestions.)

- Junior high orientation is a critically important time to expose both students and parents to expanded career options. Offer to supply material from the **Resource Center** for the orientation.

- Graduation ceremony can be made more equitable through choice of speakers and avoiding seating arrangements based on gender.

- Borrow some material from the **Resource Center** for some leisurely summer reading. In addition to basic equity materials, there are many current works available for enjoyable background reading on various aspects of equity-related issues.

To request more information about the **Equity Center**, or to borrow materials from the **Resource Center**, contact:

New York State Occupational Education Equity Center
47 Cornell Road
Latham, New York 12110-1402
Telephone 518-786-3211
FAX 518-786-3245

Myra Sadker Advocates

for Gender Equity

Myra Sadker Day

March 5, 1998

A National Effort to Break Gender Barriers

The purpose of ***Myra Sadker Day*** is to create a national rallying point to promote gender equity. This visible marker will draw on a national corps of volunteers in an effort to break the gender barriers that inhibit both females and males.

The first annual celebration of ***Myra Sadker Day*** will be held on ***March 5, 1998***, on what would have been Myra's fifty-fifth birthday.

Myra Sadker: The Person

This day is named in honor of Dr. Myra Pollack Sadker (1943-1995). Dr. Sadker pioneered much of the research documenting gender bias in America's schools. From grade school through graduate school, from inner city to rural towns, she uncovered not only blatant gender discrimination in textbooks and sports funding, but also subtle patterns of inequities that shaped the way teachers instructed students. She found that boys dominated the classroom, receiving more frequent, active, direct and precise instruction. Sometimes this attention was positive, sometimes negative, sometimes it was appreciated by boys, and at other times boys found the spotlight uncomfortable. Sitting in the same classroom, Myra Sadker found that girls, regardless of racial or ethnic or class background, were being consistently, if unintentionally, shortchanged.

Such bias is not confined to schools. From corporate board rooms to social and recreational settings, females still find themselves the object of biased words and behaviors, frequently silenced or short-changed by the expectations and actions of others. And males also pay a price. Sexism often blinds boys to a real understanding of the meaning of their future role as husbands and fathers, missed opportunities which add to the high divorce and child abandonment statistics later in life. High teenage pregnancy rates among females and the culture of violence surrounding males are other costs of gender stereotyping. This is a cycle which needs to be stopped. Sexism is not a "girls' only" issue. It is a two edged sword: sexism injures girls, but it harms boys as well.

More Than 101 Ideas for Myra Sadker Day
March 5, 1998

1. Establish an award to recognize children who promote equity
2. Do a play about gender equity in school
3. Write an equity column or article in the paper
4. Organize a walk, race, or athletic event for equity
5. Generate a timeline on the women's movement
6. Analyze books for bias
7. Honor people who embody spirit of Myra Sadker
8. Visit a women's college
9. Talk with parenting fathers
10. Train staff to eliminate sexist language
11. Have children interview non-traditional workers, role models
12. Develop posters that promote equity
13. Take youngsters to a women's athletic event
14. Create a videotape on gender equity
15. Reformulate or construct an equitable workplace
16. Monitor a school or district for equity
17. Create a non-sexist career festival
18. Plan cross-age activities on gender equity
19. Do a research project on gender bias
20. Award a Myra Sadker scholarship
21. Quilt for gender equity
22. Invite guest speakers on equity topics
23. Organize a joint equity project with an organization
24. Present an equity workshop at a conference
25. Observe classrooms to detect bias in interactions
26. Search websites for gender equity issues
27. Create bias buster groups
28. Develop and share a local gender resource list
29. Manage an equity booth at a toy, computer or grocery store
30. Engage media personnel to acknowledge the day
31. Lobby the state or city gov't to support equity
32. Conduct a Who is Myra Sadker? event
33. Train media representatives on subtle bias
34. Give *Failing at Fairness* by the Sadkers to someone as a gift
35. Set up a mentoring or shadowing project
36. Study how religion and gender intersect in life
37. Try activity that is non-traditional for your gender
38. Develop effective strategies to manage gender "put downs" and share your results
39. Conduct a workshop for support personnel to minimize bias and discriminatory actions
40. Develop and teach a lesson on Myra and educational equity
41. Read non-sexist stories to children
42. Create a program to "teach today's boys to be tomorrow's dads"
43. Design a local calendar of famous equity events and leaders
44. Sponsor a poster, essay, or music contest that promotes equity
45. Analyze greeting cards for stereotypes
46. Begin planning for "Take your daughter to work" day
47. Create bookmarks that remind readers of equity
48. Thank a significant mentor, model or learner
49. Record your own biases from childhood and identify the ones you've overcome
50. Plan a conference, workshop or meeting around the day
51. Create a coalition meeting of local equity advocates
52. Publicly protest a company that supports a sexist policy
53. Offer free training and materials on Myra Sadker Day
54. Lobby a women's issue in a govt arena
55. Honor an equity organization in Myra's name
56. Seek or provide funding to develop a gender fair curriculum unit
57. Study the intersection of gender and other equity issues (race, class, etc.)
58. Analyze TV, radio and newspapers for fairness
59. Learn about bias by watching and critiquing media
60. Create a time capsule for equity in the 21st century
61. Compile and distribute a brief equity bibliography

62. Submit a grant proposal to balance programs for males and females
63. Sponsor a diversity meeting or club at school
64. Create a quote of the week board that presents famous and diverse voices
65. Talk with a colleague from a different racial or ethnic background and examine gendered views
66. Create a parents' booster club that promotes equitable school programs
67. Compile a list, collage, poster or bulletin board of non-traditional heroes
68. Create a graphic design for Myra Sadker Advocates
69. Examine class enrollments by gender, in all upper school programs
70. Acquire or donate funds to purchase equity materials
71. Redesign the logo or mascot of your office or school to be more inclusive
72. Write a public service announcement regarding equity and submit it to a radio station
73. Check-out the gender enrollments in sports programs
74. Focus on linguistic bias as you edit language in a brochure, newsletter or fictional story
75. Have female business owners speak to students
76. Have diverse parents talk about gender in their work and family
77. Research gender disparities in drug and alcohol use at your school
78. Design a board or computer game that highlights famous equity advocates
79. Submit names of females for non-traditional leadership positions and roles
80. Have your Title IX Coordinator present to your group
81. Do a site exam of your hallways to see if visuals affirm or undermine gender balance
82. Write a report on a civil rights advocate of the opposite sex
83. Volunteer to assist Girls Inc., Girl Scouts, and others with funding
84. Talk with your children about gender
85. Design a logo for Myra Sadker Day
86. Have youngsters read and discuss "New Moon"
87. Model non- stereotypical play with children
88. Schedule a meeting with a principal, president or CEO to talk about gender equity
89. Learn about your sexual harassment policy
90. Cook with a boy, play a sport with a girl
91. Write a letter to an editor about illegal gender practices
92. Blow the whistle on Title IX non-compliance
93. Read a story with a female protagonist
94. Analyze a teacher education video for bias
95. Work with teen parents on child rearing skills
96. Visit your Boys and Girls Club to learn about their gender inclusive programs
97. Volunteer your group at a shelter and avoid stereotypic tasks
98. If necessary, file a Title IX grievance
100. Alert others to gender bashing music
101. Use the internet to discuss gender politics
102. Identify and honor males who break gender barriers
103. List what non-traditional tasks you do
104. Run for an elected office and promote equity
105. Train others to respond to sexist jokes
106. Promote a non-sexist book or film
107. Develop "baseball cards" of famous women
108. Design a short and long range plan for equity
109. Kick-off a yearlong event that focuses on equity
110. Research standardized test data by gender
111. Generate your own idea

Special thanks to the National Coalition for Sex Equity in Education (NCSEE) colleagues for assistance in generating this list, including Carvll Luke Cram, Maria Cruz Jonzen, Melanie Flatt, Sylvia Hara Nielson, Alicia Heiman, Mary Wiberg, and June Wilson

SOME CLASSROOM STRATEGIES TO FOSTER EQUITY

1. Plan hands-on conscious raising activities for students to determine cultural sex-role messages. Examples: assign mixed groups of students to analyze the five most popular television programs of classmates, current pop, soul or rock music hits, classroom textbooks, comic strips, or movies by sex of characters, frequency and types of behaviors depicted. Discuss the findings in class.

2. Conduct a class survey of interests and favorite on-going activities of students. Identify untried/unmastered areas relating to the school environment. Compare activity difference between the girls and boys in sports, science, computers, art, drama and extracurricular leadership activities. If strong group differences are found, discuss implications of the findings with the class (depending upon grade level). Encourage individual exploration and skill development by both boys and girls in untried areas.

3. Assign boys to activities requiring practice in nurturance, interpersonal skills and cooperation.

4. Make a class-cooperative quilt, with each student designing and contributing one square.

5. Have students design posters with themes such "Girls and Boys Together", "We Can Be Anything", "Men and Women Helping Each Other", etc.

6. Plan cooking projects in which all aspects of planning menus, cooking, and cleaning up are shared equally by boys and girls.

7. Set up activities in which boys learn to take care of pets and plants.

8. Verbally reward your students to encourage empathic behavior in boys.

9. Identify common put downs of both boys and girls. Conduct class discussions about the "ways" of such incidents and discuss ways children can help change attitudes. Put suggestions to work. Let students plan an on-going project. Share incidents in class through individual accounts of successful strategies as the project progresses.

10. Prepare class assignments of bulletin board displays of "atypical" heroes and heroines.

Taken in part and reprinted from chart "We Are What We Play: How Sex Typing Affects your Students" with permission from the American Institutes for Research, Box 1113, Palo Alto, CA 94302. Developed by the Center for Education Equity.

WE ARE WHAT WE PLAY

How Sex-Typing Affects Your Students

Youngsters' play is a powerful medium for transmitting cultural and gender role standards. Different play experiences for boys and girls lead to different opportunities to practice and develop cognitive and effective skills. Many skills and behavioral patterns learned and practiced from early childhood can be observed in sex-differentiated aptitudes and classroom behaviors that emerge in early adolescence.

Research on sex role socialization suggests that gender differences between boys and girls in areas such as verbal ability, math computations, general I.Q., spatial abilities and self-confidence stem from cultural channeling. Such channeling encourages boys to engage in activities that foster independence, exploratory behavior, spatial abilities, problem-solving skills and self-confidence. Girls, on the other hand, engage in activities that emphasize verbal/interpersonal skills, with scant attention to problem solving behaviors.

Skills and Traits in Play

Research Findings	Educational Implications
GIRLS play with a narrow selection of toys and in activities that: * foster small muscle skills * require little practice, repetition or competition * inhibit environmental exploration and adventurous play * represent domestic, nurturant and altruistic themes (dolls, doll houses, kitchen equipment, nurse kits) * rarely emphasize science, technology, constructing, or conceptualizing	**GIRLS** develop a narrow repertoire of interests defined by: * nurturing, interpersonal and helping behaviors, * a sense of self related to physical attractiveness and opinions of others, * declining self-confidence, particularly in untried domains (science, math, computers, athletics, competitive activities), and * passivity in interactions with the environment.

BOYS play with a wide variety of toys and in activities that:
- require both small and large muscle skills
- encourage skills practice to mastery levels through competition
- foster environmental exploration and adventurous play
- represent themes of mastery and problem solving

BOYS develop a varied repertoire of interests defined by:
- problem solving skills and goal attainment,
- expertise in tasks involving motor coordination, spatial visual skills, science and technology,
- a sense of self-related to task mastery and control over the environment,
- increasing self-confidence across domains,
- interest in adventurous activities.

Play Group Structure

Research Findings

GIRLS play:
- mainly with other girls
- in quiet games requiring little competition or physical activity
- in activities requiring a few simple rules

BOYS play:
- mainly with other boys
- in groups of three or more
- in active, competitive games and activities
- in activities with increasingly complex rules and hierarchies

Educational Implications

GIRLS learn:
- power relationships mainly in personal ways
- interpersonal skills transferable to one-on-one or small group situations only
- followership and cooperative roles but not leadership roles
- few large group skills transferable to achievement and work domain

BOYS learn:
- power relationships in abstract, nonpersonal ways
- both leadership and followership skills transferable to achievement and work domains
- strategies to work toward group goals abstracted from personal goals

Play Group Values

Research Findings

BOYS' play group reward:
* physical and emotional strength
* good academics
* athletic prowess
* other serious pursuits, individual and group
* high aspirations

BOYS' play groups devalue;
* displays of emotions and intimacy in friendship
* girls and girl-associated activities

Educational Implications

BOYS are motivated to
* participate in physical activities
* specialize in academic interests and hobbies
* make plans to achieve goals
* hide feelings and emotions
* avoid close interpersonal relationships
* actively put-down girls and their activities
* intimacy in friendship

Research Findings

GIRLS' play groups reward:
* popularity
* physical attractiveness
* fashion
* conformity
* intimacy in friendship

GIRLS' play groups devalue:
* physical strength
* academic success
* non-conformity
* serious pursuits, particular by individuals

Educational Implications

GIRLS are motivated to:
* strive to be liked by others
* focus increasing attention on their appearance
* inhibit their individual talents and interests
* gain identity through association with others, usually male
* play down their individual successes
*avoid athletics and serious academic subjects

Source: American Institute for Research, Box 1113, Palo Alto, CA 94302.

INSTRUCTIONAL STRATEGIES

Kathie Anderson, Rhonda Brooks, and Sr. Mollie Reavis, SNJM

As a result of attending the Woodrow Wilson GEMS Congress, the following list of strategies to promote learning opportunities for girls was compiled. Some of the following strategies are also useful for encouraging minority students, and others, who may not be active participants.

Classroom Strategies

*Mentally divide your room into quadrants. If students in all quadrants don't participate, you can say, "Let's hear from someone in the back right corner."

*Ask students to state concepts out loud (this helps students to learn the vocabulary of the subject).

*Cultivate bonding around an intellectual challenge (this provides students with an opportunity to feel like a team).

*Use the human body as a vehicle for interesting girls in physics, etc. (girls often find the human body fascinating and will identify with phenomena related to the body).

*Encourage girls to participate in extracurricular math and science activities.

*Stress safety precautions instead of dangers (girls will sometimes be reluctant to participate in lab activities if they seem too dangerous).

*Use computer and lab partners (most girls work better in teams).

*Introduce lessons with an overview (girls learn more readily from the "big picture" rather than from disconnected details).

*Incorporate students' comments into lectures (this technique validates the students' understanding of concepts).

*Acknowledge the contributions of both men and women to mathematics and science via posters, reports, examples, story problems, etc.

*Use cooperative activities and some single-sex small groups.

*Provide female role models.

*Provide opportunities for girls to develop spatial visualization skills.

*Use writing to help students express and clarify their feelings and thoughts (e.g., math autobiographies, science journals).

*Create an attractive classroom environment (research shows that girls learn better in an aesthetically pleasing environment).

*Wait 4 or 5 seconds before calling on a student to answer the question (girls often wait until they have formulated an answer before they raise their hands; boys often raise their hands immediately and then formulate an answer).

*Don't grade on a curve (encourage all students to realize their potential rather than to compete against one another).

*Solve problems by multiple methods (this appeals to students with different learning styles).

Classroom Attitudes

*Encourage a "can do" attitude; teach students to give themselves credit. (Girls tend to credit their achievements to luck rather than to their ability.)

*Encourage all students to take additional math and science courses (teacher encouragement has been shown to be a major factor in students' decision-making processes).

*Encourage girls to take risks.

*Judge what girls say, not how they say it (don't assume that if they hesitate or apologize, they don't know the answer).

*Help girl students value themselves (girls often have a severe drop in self esteem during the middle school years. Women teachers need to model a healthy self respect and male teachers need to have respect for both female students and female colleagues).

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Teaching Strategies

These activities have been adapted from "Selected Activities and Recommendations for Creating a Sex-Fair Classroom" by Suzanne Hurwitz and Susan Schaffer in Myra and David Sadker's *Between Teacher and Student: Overcoming Sex Bias in Classroom Interaction*. Washington, DC: U.S. Department of Education, 1980. The original text has been changed or expanded upon to accommodate the issues, concepts, and language used in this publication.

Overcoming Sex Bias in Active Teaching Attention

- Ask a colleague to observe your classes, using an assessment sheet for determining teacher-student interaction patterns. Better yet, have your classes videotaped or audiotaped. Then, using the assessment sheet, replay the tapes and evaluate your teaching behavior.
- Circulate around the room, positioning yourself in different areas, to influence the degree of involvement of both girls and boys in learning.
- Make a conscious effort to encourage equal participation of all students. Hold both boys and girls accountable to the same standards for participation in classroom discussion.
- Issue both *lower order* and *higher order* questions to girls and boys on an equitable basis.
- Measure the time you wait for replies to your questions in class to ensure an equal distribution for girls and boys.
- Issue equitable verbal and nonverbal reinforcement to both girls and boys.
- Give extended directions to boys and girls on an equitable basis; provide extensive directions so girls and boys can complete tasks independently; and, avoid doing or completing tasks for students.

Overcoming Sex Segregation in Classroom Interaction

- Ask a colleague to observe your classes, using an assessment sheet for determining the sex segregation patterns. Better yet, have your classes videotaped or audiotaped. Then, using the assessment sheet, replay the tapes and evaluate the segregation patterns.
- When seating or lining up pupils, use categories other than gender to divide the class.
- At the elementary level, avoid sex-segregated play areas.
- When students self-segregate in their own activities, it may be necessary to form a new organizational pattern to achieve classroom integration.
- Encourage both sexes to participate in traditional and nontraditional activities.
- If students are uncomfortable with nonstereotyped assignments, discuss the issue of sex stereotyping and today's changing roles for women and men.
- Examine textbooks and other instructional materials for sex-role stereotyping and sexist language.
- Make a conscious effort to assign boys and girls leadership and support roles on an equitable basis both within and outside the classroom (for example, field trips).
- Encourage and reinforce girls and boys who are working and playing cooperatively.

Overcoming Sex Bias in Classroom Discipline

- Ask a colleague to observe your classes, using an assessment sheet for determining the classroom discipline patterns. Better yet, have your classes videotaped or audiotaped. Then, using the assessment sheet, replay the tapes and evaluate classroom discipline patterns.
- Avoid biased expectations, such as stereotyping girls as obedient and complacent and boys as aggressive and disruptive.
- The manner in which reprimands are given should be related to the misbehavior and not applied on the basis of sex.
- Harsh and public discipline is likely to be an ineffective approach for both female and male students.

- If penalties are given for inappropriate behavior, they should be related to the infraction and not applied on the basis of sex.

Overcoming Sex Bias in Verbal Evaluation

- Ask a colleague to observe your classes, using an assessment sheet for determining the verbal evaluation patterns. Better yet, have your classes videotaped or audiotaped. Then, using the assessment sheet, replay the tapes and evaluate your own verbal evaluation patterns.
- Avoid stereotyping girls as excelling in neatness and boys as excelling in intellectual accomplishment.
- Distribute praise for academic work to boys and girls on a fair and equitable basis:
  - — *Verbal reinforcement*—When students hand in good papers or make good comments about subject matter, offer such responses as "fine," "very good," or "excellent point."
  - — *Nonverbal reinforcement*—You can respond positively to students' academic work without saying anything: maintain eye contact with the students who are talking, lean toward them, move closer, nod affirmatively, smile.
  - — *Delayed reinforcement*—If a boy or girl makes a good comment at the beginning of a lesson, refer to or build upon that idea during the lesson or even during another lesson conducted at a later time.
- Identify both boys and girls whose academic work reflects neatness and conforms to rules of form and meets the standards of intellectual competence.
- When a student's verbal comments or written work is incorrect or fails to meet standards of form and intellectual quality, go beyond criticizing and offer remediation comments to both girls and boys. Make sure the boy or girl clearly understands the nature of the inadequacy as well as how to correct it. Remember, it is extremely important to encourage both girls and boys to try harder (attribution to lack of effort). Without this, students may think they do not have the ability and may simply give up.

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Suggested Activities for Teachers

The five activities in this section are specifically intended to aid teachers in gathering information on how students perceive gender differences, to help pinpoint the factors that influence student attitudes, and to explore some of the ways in which gender-role stereotyping can be manifested. Keep in mind that these activities are written as suggestions to use with students in K-12 classrooms. Teachers should be creative and flexible in adapting the activities to their needs or in designing new, parallel activities for their classrooms.

Activity 1

Take a survey of your class about their attitudes toward the "proper" roles of girls and boys, women and men. Remember to ask "Why do you think so?" Keep in mind that it will be easier to interpret the results if you make this a written assignment. Some students, particularly those in older age groups, will respond more openly if you do not ask them to identify themselves. If you decide not to use names, be sure you have your students indicate their sex on their questionnaires. Some sample questions might be:

What are the differences between girls and boys? Women and men? What are the similarities?

If you had a choice, which sex would you prefer to be? Why? Who is smarter? Who is more active? Why?

Can a man be a nurse? Why or why not?
Can a woman be a firefighter? Why or why not?

Student Discussion

It is important here not only to determine the differences students perceive in the roles of boys and girls, women and men, but also to get your students to verbalize why they think such differences exist. You might keep the following questions in mind to spur discussion with your class: Are you satisfied with the way things are? Do you all feel this way? Does this hold true for everyone? Can you think of examples where this is not true? How do you think these differences affect us? What changes would you like to see made? How would you go about making these changes?

Postactivity Discussion

Summarize the results of your survey. Did your survey show markedly different results for boys and girls in your class? Note whether or not your students seemed interested in this topic. Was there general consensus on answers to your questions? Was there conflict? Were you asked for your opinion? If so, how did you respond? Were male and female roles clearly defined? Did you see restrictions for either gender being expressed by students? In analyzing your students' positions, what implications do you see for their education? What can you do about these implications?

Activity 2

Have your class keep a running list for several days titled "Ways I have benefited by being a female (male) today." Or ask them to keep two parallel lists, one for advantages and one for disadvantages. Collect the lists and discuss them with your class.

Student Discussion

Do students believe there are advantages and disadvantages to being male or female? Why or why not? What changes would students like to see that might distribute the advantages and disadvantages more fairly?

Postactivity Discussion

Summarize the kinds of advantages and disadvantages students perceive as gender related. Was there general consensus among your students on the advantages and disadvantages? Discuss with your students ways to help them overcome their perceived disadvantages.

Activity 3

Ask your students to keep a running list for one week on the activities they are engaged in at home. What chores are they responsible for doing?

Student Discussion

Do students think the chores they get have anything to do with whether they are male or female? Why? Who makes the decisions about how chores are assigned at home? Why? Would they prefer to do other chores than the ones they now have? Why?

Postactivity Discussion

Summarize the results of the one-week survey. Ask your students what changes they would like to see made and how they would like to have chores distributed in the family when they grow up. Why?

Activity 4

Ask your students to create two collages entitled MAN and WOMAN. Be clear about whether you are asking students to think about how men and women are perceived by people in general or asking them what they themselves think.

Student Discussion

Discuss the qualities suggested for women and men in the finished collages. After the class has agreed on the qualities represented by the collages, you may wish to write them on the board. What qualities do your students view as positive? What qualities seem negative? How do students think these experiences came to be? What resources did students use (e.g., magazines, newspapers)? Did the resources make a difference? Are students in agreement with the magazine portrayals? To what could they turn to produce a more realistic-or less stereotyped-collage? As a follow-up, have your students try a nonstereotyped collage.

Postactivity Discussion

Bring the collages to a class discussion so that you can discuss the kinds of qualities your students assigned to men and women. You may wish to use the collages for other class discussions in the future.

Activity 5

Have your students monitor television advertisements and programs or comic strips for a period of one week. Ask them to list or collect examples of women and men shown either together or separately in (a) unfair or discriminatory ways and (b) fair or equal ways.

Student discussion

What do the media seem to be saying about male and females roles? How are women represented? Are they represented as often as men are or in as varied kinds of ways? How are men represented? Compare the ways in which men and women are represented in clothing, physical appearance, feelings and emotions, and actions.

Postactivity Discussion

After you have collected the results, discuss the following with your students: Are there ways you or your students can bring about change? One idea is to write a letter to one or more of your local television stations describing the results of your survey and class discussion. Tell the station manager what changes you would like to see, or congratulate her or him if your feel that the station is doing a good programming job in this respect.

The above activities are really deigned to encourage discussion in your classroom. Once we begin to listen carefully to the arguments of others, and to reflect upon our own, we notice that decisions and judgments can be made in different terms, with different ideas about why something may be good or bad, desirable or undesirable. This is particularly true when the discussion is about social conditions and arrangements, and the arguments turn on what ought to be much as on what now exists. As a final exercise, have students brainstorm about how they can act as change agents in their school to break down the stereotyped role definitions that exist. Can they formulate a workable plan to translate their ideas into actions?

Source: *Gender Equity for Educators, Parents, and Community*, Equity in Education Series, WEEA Publishing Center

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Topical Bibliography

Summer 1997

Gender Equity Issues

An ERIC Bibliography specially prepared for
the Moore Multi-Cultural Center at Brevard Community College

The following citations cover the latest ERIC literature on gender equity issues. ERIC documents (references with "ED" numbers) can be read on microfiche at approximately 900 libraries worldwide. In addition, most may be ordered on microfiche or in paper copy from the ERIC Document Reproduction Service at 800/443-ERIC. Citations preceded by an asterisk (*) refer to journal articles, which are not available from EDRS. Journal articles may be acquired through regular library channels or purchased from from article clearinghouses such as CARL Uncover at 800/787-7979 or UMI Articles Clearinghouse at 800/248-0360. For a list of libraries in your area that house ERIC microfiche documents, an EDRS order form, or more information about our products and services, please contact the ERIC Clearinghouse for Community Colleges at 800/832-8256, or via the Interent at ericcc@ucla.edu.

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LIFTING THE BARRIERS

Lifting the Barriers: 600 Tested Strategies That Really Work to Increase Girls' Participation in Science, Mathematics and Computers,
by Jo Sanders

This publication arose out of the experiences of 200 educators participating in the Computer Equity Expert Project, which Jo Sanders directed from 1990 to 1993. These teachers of mathematics and science returned to their classrooms after training sessions and formed "equity teams" in order to carry out strategies to reverse girls' avoidance of science, math and computers. Lifting the Barriers is a compilation of those classroom tested strategies. Though they were aimed at young women in high school, Sanders notes that these strategies are highly transferable. They are effective across curricula and with young men in underrepresented subjects and careers.

The strategies are offered in the following groupings:

*Contests and competitions
*Counselors
*Curriculum
*Extra-Curricular programs
*Field trips
*Fundraising
*Materials
*Mentoring
*Parents
*Policies: School or district
*Recruiting girls for advance courses or clubs
*Role models, visitors, speakers
*Scheduling and resource allocation
*Spreading the equity word to girls and boys
*Spreading the word to colleagues
*Teaching techniques

Strategies from the Curriculum and Teaching techniques are included in this guidebook.

The book is available from Jo Sanders, P.O. Box 483, Port Washington, NY 11050. Send a check payable to Jo Sanders for $13.95 +15% for postage and handling.

Teaching Techniques

Classroom Interactions

- Make a conscious effort to call on girls no less than half the time, to give them as much time as boys to answer questions, and to ask them as many "how" and "why" questions as boys. Pay special attention to silent girls who rarely demand your attention.
- Make a conscious effort not to solve problems for girls when they need help, but rather to give them a clue that will enable them to solve the problems for themselves.
- Videotape teachers (including yourself) to enable yourselves to observe your own gender-related classroom behavior. You could videotape the students as well, and after a discussion of gender-biased behavior in the classroom ask them to watch the videotape with gender bias in mind.
- Ask students to tell you if you are calling on boys more than girls.
- Teach your students to recognize inadvertent inequitable behavior and help you eliminate it. You can even give them permission to hit you over the head—gently—when you let males do things for themselves but do things for females.
- To make sure you call on all students equally, two

methods: 1) Write each child's name on an index card, three cards per child. Shuffle them and work your way down the stack to call on children. 2) Write each child's name on a popsicle stick, put them in a can, shake them up, and pull one out.

- Ask a colleague to observe you in class for gender bias in teacher/student interactions.
- Make a videotape with other faculty members on improved teaching styles after paying attention to gender-biased teacher/student interaction patterns.
- Be aware of girls who hang back in science lab: do not permit this behavior.
- Do not permit boys to make sexist comments or exhibit sexist behaviors in school. (You wouldn't permit racist talk or behavior, would you?)
- If you've been seating boys and girls alternately to keep boys in line, instead seat girls next to each other because they like helping each other figure things out. The boys will probably behave better than you expect, anyhow.
- If boys make fun of girls in class to the point that girls feel reluctant to ask or answer questions, ask a counselor to talk with the boys separately while you talk with the girls (or vice versa) about dealing with the problem.
- Think about whom you have in mind when you ask especially difficult questions. If it's boys, consciously ask these questions of girls.
- If some boys' obstreperous behavior to ask for help—calling out, waving their hands madly—discourages girls from asking for help, distribute red plastic cups to students and require that requests for help be expressed by placing the cup silently on top of the monitor or on the desk or lab table.
- Tell boys in your class you will not call on them unless they stop being so "grabby" in raising their hands.
- Ask a student to keep track of the number of girls and boys you call on, and to let you know if you call on boys disproportionately.
- Pay attention to where the girls are sitting. If they're clustered in the back of the room, change the seating order.

Language

- Don't say "guys" to refer to girls.
- Help the sports coaches rewrite the regulations to avoid the generic "he."
- If you or your students use the supposedly generic "he" to refer to females as well as males, try using "she" once in a while to make the point that "he" really refers to males only.
- Encourage students to correct teachers who use the generic "he." "He or she," they should insist.
- Have girls tally the number of times boys interrupt them as they speak. Hold a discussion on the results.
- When speaking about technologically knowledgeable career people, deliberately alternate pronouns—she, then he.
- Don't refer to "the ladies in the office" but instead refer to them by name.

- At a faculty meeting, tally the number of times women are interrupted and the number of times men are. Announce your results.
- If girls tell you about sexist, demeaning or exclusionary comments made in class by other teachers (such as "You girls probably won't be interested in this ..."), talk to the teachers privately or ask an administrator to do so.

Chores and Tasks

- Ask your female student aides to do more of the technical tasks and your male student aides to do more of the paperwork.
- Make sure the female library aides work the computers half the time, while male library aides stamp due dates and reshelve books half the time.
- Insist that girls as well as boys learn to set up and use all electronic equipment: VCR's, video cameras, printers, scanners, and whatever else you have.
- Ask a girl to try out a new piece of classroom equipment or software for the first time.
- To help you become familiar with new software, ask girls to try the programs first and teach them to you.
- Ask girls to move equipment and carry things.
- If you find that mostly boys respond when you ask for volunteers for technical tasks, appoint helpers instead.

Self-Esteem

- Look a girl in the eye and tell her, "You're really good at this."
- Write notes occasionally to girls congratulating them on doing especially well on tests, labs or class discussions.
- When girls leave your school for the next higher one, write them a note congratulating them and encouraging them to keep up their interest in your subject.

Student Groupings

- Ask girls to give you the name of the person they would like to work with for computer or lab projects. When assigning projects, take pairing preferences into account whenever possible.
- In science lab prevent male dominance by creating single-sex lab teams, or if co-ed then two stronger girls with two weaker boys.
- With a colleague, divide students and team-teach your course for three weeks in single-sex environments. Afterwards discuss with students the differences they found and try to incorporate the single-sex advantages into the co-ed setting.
- Use cooperative learning environments more often, especially in single-sex groupings.
- Ask students whether they prefer to work in single-sex groups, mixed-sex groups, or alone, and let them work this way. Ask again soon so they aren't locked into an inflexible pattern.
- If boys in science class are monopolizing the equipment or computers, divide the class up with another teacher, with one of you taking girls to the lab and the other taking boys to the computers, then

switching the next day. Among other advantages this forces the girls not to rely on boys to provide the answers.

Other Teaching Technique Strategies

- ▲ Let girls see you using the computers—frustrations as well as successes, and how you go about solving problems.
- ▲ If you don't have enough computers for all the students, have girls and boys take turns. (See Scheduling and Resource Allocation on page 73.)
- ▲ Teach your female student lab assistants or computer aides separately from the boys.
- ▲ If girls tell you they don't like your subject very much, explain to them why they need to learn it just the same. Emphasize how it will be useful to them in the future.
- ▲ Do not permit a photographer to pose a picture of a boy at a computer or lab table and a girl standing behind him.
- ▲ If you have an e-mail address at home, give it to your students. Some will prefer this private method of communicating with you and will learn to love the computer this way.
- ▲ If your female students are too comfortable with sexism, exaggerate it until they understand. If girls are reluctant to try to solve a problem, announce "All girls out in the hallway until you come up with a solution." Put up pictures only of male scientists. Comment that women aren't smart enough to be scientists. When the girls finally object, hold a clarifying discussion.
- ▲ Ask girls what they think of the equity strategies you are carrying out: Do they work? Could others work better?

- ▲ If you discuss specific students at faculty meetings, check on how girls are doing in computers, math or science.
- ▲ Especially if your classroom is windowless, liven it up with colorful posters and plants.
- ▲ If colleagues tell you they have taken students to conferences on careers in math, science or technology, ask what proportion of the students they took were girls. They may not realize they took only boys.
- ▲ At the beginning of every grading period hand out an anonymous survey to your students about what they want and need from you. If many of the girls write back that you "talk too much and assume they know too much," work on improving.

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Curriculum

Individual Subjects

SCIENCE

- Have students draw a picture of "a scientist." Discuss stereotyped features with particular attention to how they exclude women.
- Require that all science reports be word-processed.
- If you need a lab assistant, choose a girl.
- Invite women scientists to speak to your students in class.
- Schedule all-girl labs to keep girls from sitting back while boys complete the work.
- Use a female mannequin.
- When a visual of a scientist is called for, show a female scientist.
- Have students read novels dealing with science to appeal to girls (and boys) who relate primarily to literature.
- Buy and use a science toolkit package with probes and sensors that can be used for measuring temperatures of living things and other uses.

- In science lab groups, require that girls not be the recorder. This gets them more actively involved in the lab work.
- Present information on science occupations and earnings annually to students.

COMPUTERS

- Pair girls at the computers, even if you have enough computers for everyone.
- Emphasize programming or desktop publishing rather than secretarial computer skills for high school girls.
- Change the course description of a multi-media course from one that emphasizes the equipment to one that emphasizes the final products. Also refer to teamwork, cooperation, and fun.
- Do less programming and more hypertext authoring, multimedia and/or robotics in computer class.
- As a term assignment in an advanced programming course, have students create an interactive game that has graphics, music and a scorekeeping system, and offers positive feedback to the user. Students' games do not have to involve killing and destroying. They can focus on helping elementary students with practice in spelling, identifying female athletes and historical figures, simulation games with female detectives, and identifying 60's music correctly (with digitized music selections downloaded from a bulletin board). Use the games with younger students next year.
- Offer a girls-only Introduction to Computer Science class.
- Use popular singers in addition to or instead of using baseball statistics for a database lesson.

- Invite women computer specialists to speak to your students in class.
- Teach Logo, which tends to appeal more to girls, rather than BASIC. Refer to the Logo turtle as "it," not "he."
- Teach students how to do animation on a computer.
- Invite girls to be your computer aides. Ask them to be responsible for the technical clean-up at the end of the day: dumping files, etc.
- Get students involved in telecommunicating with students in other states or countries.
- Use Lego-Logo.
- Present information on technology occupations and earnings annually to students.

MATH

- Invite a woman who owns a technical business to math class to talk about the math she uses in her business.
- Do a CD-ROM lesson on famous women in mathematics.
- Invite women mathematicians to speak to your students in class.
- Have students construct various types of graphs, manually or with a computer, illustrating labor market and earnings statistics.
- Add more manipulatives to the curriculum in the lower grades to boost girls' spatial skills.

- Use the Math Experimentation Toolkit for the computer.
- Present information on mathematics occupations and earnings annually to students.

SOCIAL STUDIES

- Include data base activities.
- Obtain labor market statistics—how much people earn in technical and non-technical occupations, and the proportion of women in each occupation—and teach it in Social Studies class. (See "Resources" on where to get labor market data.) Discuss thoroughly. Follow it with related readings.
- For a class project, have a student research stereotypes of careers as appropriate for males or females and the realities of the labor market in terms of participation and earnings.

ENGLISH / LANGUAGE ARTS

- As an English assignment, ask students to write a composition on this question: "How would your life be different if you woke up tomorrow the opposite sex?" (Variation: "a different race.")
- Start a written discussion on a computer about women's issues. Give students articles to read and ask them to write up their reactions and respond to each other's reactions.
- Assign more books to be read with women as protagonists, or do this as a special unit.
- Use desktop publishing software to produce stories that girls (and boys) write on a computer.
- Have students research a vocational field of their choice, write a paper, spend a day with a person in the field, and discuss their experiences with the class. Urge girls to select a technical field.

GEOGRAPHY

- A geography lesson can be on famous female American scientists and the states they are from.

MUSIC

- Have students compose, orchestrate and print music on a computer.

PHYSICAL EDUCATION OR HEALTH

- Do fitness graphs on every student on the computer.

LIBRARY

- Urge girls to use the on-line encyclopedia before the printed one.
- Have a special exhibit on women in literature.
- Use CD-ROM and other interactive video.
- Order books on women in various fields.

Other Strategies

KINDERGARTEN

- Read gender-equitable stories to children.

- Encourage girls to play with blocks as well as bridal veils.

SENIORS

- Suggest that students do their senior project on an equity-related topic. Arrange for them to collect data in other school buildings if appropriate.
- Require that senior project reports be written on a computer.
- Integrate varied forms of technology into required senior projects.

ALL SUBJECTS AND GRADE LEVELS

- Include units on women achievers.
- If your school gives out rewards for good student behavior, let kids have extra time in the computer lab as a form of reward.
- Organize all-girl classes in math, science and/or computers.
- Stress the usefulness of science, math and computers to everyday situations, problems and needs.
- During Women's History Month (or anytime during the school year), present brief biographies of notable women in your field and ask students for the names of the achievers, or vice versa. Give small prizes to those who answer correctly.
- Increase the amount of hands-on computer use in classes.
- Assign a report on famous women in your subject. Have students ask the librarian for help if needed.
- Let other faculty know that girls are available to help them as computer experts and trouble shooters.
- Create an entire bulletin board on women in your field.
- Lead a class discussion on the pros and cons of having a special month devoted to women's achievements (Women's History Month in March).
- Use interesting software for remedial and review purposes.
- If there is no AP or advanced course in your subject, girls who want such a course can push for it with the administration.
- Ask girls to try out your new software. They can help you teach it to the other students.
- Hold frequent discussions about the career implications of your subject, and make sure girls are fully involved.
- Design curriculum units around interests you know many girls have.
- When girls are at the computer, make sure they are not doing only word processing.
- Read the district's policy on sexual harassment to all your students. Hold a discussion on it.

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Female-Friendly Strategies to Teaching Science and Technology

1. Present the practical and humanitarian uses of technology to help students see it in its social context.

2. Increase the numbers of observations traditionally used and remain in the observational stage longer.

3. Validate personal experiences females are likely to have had by incorporating them into the class discussion or lab experience.

4. Include discussions of ethics and social responsibility when presenting information about science and technology.

5. Identify instrumentation, equipment, components, everything in use. Never assume students know how to calibrate an instrument.

6. **Minimize jargon.**

7. **Get students' hands on every learning experience possible.**

8. **Create situations where students teach others.**

9. **Keep an eye on the power balance in your lab teams.**

10. **Be vigilant about gender and sexual harassment in your class, labs, hallways and faculty lounge.**

Lynne Sheren
Gender Equity Workshop

Mid-Hudson Consortium for Gender Equity
in the Classroom
and
Dutchess Community College

Encouraging Student Success:
How to Integrate Strategies into Your Course

February 29, 1996

Presented by Johanna Halsey & Susan LaFosse

Johanna Halsey
Math Department
Dutchess Community College
53 Pendell Road
Poughkeepsie, New York 12601

914-431-8557
e-mail: halsey@sunydutchess.edu

Susan LaFosse
Math Department
Dutchess Community College
53 Pendell Road
Poughkeepsie, New York 12601

914-431-8000
e-mail: lafosse@sunydutchess.edu

ENCOURAGING STUDENT SUCCESS

Presented by: Johanna Halsey & Susan LaFosse

BACKGROUND: Although we have been actively working on techniques that could help our students become more successful learners for many years, our work took on new focus and direction in 1994- 95 when we enrolled in a course entitled "Achieving Equity in Education". Part of the course requirements were that we work cooperatively on a project that we felt addressed some equity issue in the classroom. Since we were scheduled to teach Elementary and Intermediate Algebra courses over the year, we decided to direct our attention to these courses. The following is the report we submitted at the end of our course, summarizing the work we had done, and what we planned to do for the future.

Support Strategies/ Workshops for Students in Elementary & Intermediate Algebra

PROBLEM STATEMENT: Elementary and Intermediate Algebra are developmental courses, with a majority of women students. Many of these women are non-traditional students and/or women with little prior success with mathematics. They enter the course with fear and trepidation, which greatly limits their chances of success, and hence their future involvement in courses requiring mathematics. Failure in the course further fortifies their impression that math is "beyond them", and increases their doubt in their ability to deal effectively with math related ideas.

PROJECT SUMMARY: In order to reach as many students as possible, we each routinely discussed "success strategies" during class time and built a "self reflective" component into our courses which asked students to think about how they learned best, obstacles to effective learning, and whether or not they were taking advantage of the resources available to them. We also introduced students to the concept of writing out in words mathematical processes and procedures. Turn in homework required a step by step explanation of the algebraic process, and we modeled this for them in examples written out on the board during class. Students were also regularly asked to address conceptual ideas in writing. Early in the semester, we took our classes to the department's computer room and led them through a set of instructions for accessing and using the algebra computer tutorials. These tutorials are linked to the books, and can provide a step by step analysis of how to approach exercises that are similar to those assigned for practice and turn in homework. After this introduction, we required that computer tutorials be worked on and submitted as part of the homework component of the course. Monitors of the computer room were specifically asked to be aware of and sensitive to the fact that many of the algebra students were apprehensive about using the computers. The monitors went out of their way to be helpful and reassuring to these students as they became familiar with regularly using the tutorials. We also encouraged students to find "math partners" with whom they could regularly meet for work sessions on the computer, and on regular practice exercises. To help promote getting to know other classmates, we each provided several opportunities during class time where students were asked to introduce themselves to a small group and then work cooperatively on an assignment. Additionally, we collected information about what blocks of time each student was free on campus outside of class, and summarized this for their use in identifying potential partners.

To supplement the work we did in class, we offered a series of 7 Support Seminars with volunteers from 2 sections of Elementary Algebra and two sections of Intermediate Algebra. These seminars met for an hour on alternate Wednesdays of the semester. Our core group of participants included 8 students (5 from Elementary Algebra, 2 from Intermediate Algebra, and 1 special invite who had worked through the entire math sequence at Dutchess and was currently taking Calculus I)

DATE	***TOPIC***
Jan. 25	Introduction/ Dealing Effectively with Anxieties
Feb. 8	Support Strategies & Formulating a Plan
Feb. 22	Test Analysis
March 8	Cooperative Learning Strategies
March 22	General Open Discussion
April 5	What Good is Math Anyway ?
April 19	Final Exam: How to prepare and stay calm

These seminars further developed the ideas discussed in class, and allowed the participants to share their experiences, anxieties, frustrations and successes with their peers as well as us. We encouraged the students to begin to recognize and identify their own personal learning styles, to identify their major stumbling blocks, and to make a plan for developing their own success stories and strategies. By promoting collaboration and group discussions, participants were able to develop support networks with other students, and most importantly see that they were not alone in their feelings. All students began to see the significance of creating and maintaining a "learning community" that would provide them with the mental and emotional support necessary to succeed in demanding courses.

A copy of all materials used in the Seminars is attached to this report.

DESCRIBE EQUITY COMPONENT OF PROJECT: As previously mentioned, many of the students in these courses are women. Our goal was to help these women learn to recognize and manage anxiety that impairs success and understanding, to offer alternative learning environments and techniques, and to provide the encouragement that is essential for a student who is undertaking a "risky" course. Successful completion of these courses helps ensure access to other courses that are necessary for entry into many technical jobs. Interestingly enough, we found that the males in the courses also had high anxiety levels, were in as much need of encouragement and support as the women, and benefitted equally from the various components of our project. Our analysis is that when men are not confident in their math abilities, they battle against the stereotype that math is a "male subject". This intensifies the risk of failure, and produces enormous anxiety levels. At the developmental math level, both males and females suffer from a lack of confidence, a lack of previous success, and a lack of knowing how to succeed.

CONTRAST ANTICIPATED BARRIERS WITH ACTUAL BARRIERS: Since the additional sessions were not built into student schedules before the semester began, we were concerned about attracting enough students who could attend regularly. The timing and scheduling of the sessions did prove to be a barrier, since the full group could not attend each meeting. Additionally, some students who were interested in the seminars could not attend due to schedule conflicts. Still, the core group provided us with the opportunity to elicit significant input as to the usefulness and need for the seminars. We were also concerned about providing more work for participants. These students are typically "maxed out" as far as their work load is concerned, and in addition, often have other outside commitements like jobs and family. Because of this concern, we made sure that all work was done within the sessions, and that there was little that students had to do as outside work. This helped alleviate the stress of having yet "one more thing to do" and we found that students truly appreciated the self contained aspect of the seminars.

HOW WOULD YOU REVISE THIS PROJECT IN THE FUTURE ? : We have included advance notification of the meeting time for the seminars in the Master Schedule for the Fall semester. Students enrolling in Elementary Algebra and Intermediate Algebra are advised to keep free a specific block of time for these sessions. We also received some feedback from students in other classes who expressed the desire for us to offer this type of program on a wider basis, encompassing more courses. We need to continue to think about which sessions lend themselves to a larger student audience, and which would be more effective for a smaller selection of courses.

HOW WILL THIS PROJECT BE CONTINUED ?: We will offer the seminars again in the Fall in much the same format that we offered them this semester. Additionally, we will be reporting student feedback to other department members, and encouraging them to consider incorporating some of the components of the project into their classes. We hope to create a continuing dialogue focusing on what strategies help students become more comfortable with mathematics, and which are important to help ensure their success. As we continue to work on the seminars in their current format, we will also be thinking about how it might be possible to offer them to a wider group, and how to further encourage students to take advantage of them.

PROJECT COORDINATORS REACTIONS: We were honestly overwhelmed by the students seeming surprise at finding that instructors care whether or not they were successful in their courses. On all student evaluations of the seminars, and in many of the class evaluations our concern for their success was mentioned as being one of the most important elements for them. Interestingly enough, students reported how much more willingly they will accept challenges, and put in extra effort if they know that their instructor cares about them. Unfortunately, the common student perception is that college faculty care more about the subject material than about the students. This leaves them feeling very vulnerable and ill at ease - hardly a situation that promotes success.

Almost unanimously, students reported how helpful the computer tutorials were. Many honestly admitted to being terrified of the computer before the course, but were very proud of the progress they made over the semester. Most reported that if the computer tutorials were not required as part of the course, they would not have broken through their fear and anxiety and made use of them. Many expressed sincere appreciation of the fact that we "made them confront this fear and anxiety".

Our invitation for a Calculus I student to participate in the seminars was more powerful than we had ever anticipated. Essentially, we invited the student to attend because she has expressed an interest in teaching mathematics, and we felt she would be a good sounding board for the ideas that we were presenting. Not only was she an inspiration to the other students, who found it tremendously reassuring to find that even the "good math students" confront anxieties and frustrations, but she also got as much out of most of the sessions as the students in the developmental courses. This brought out to us the fact that students need encouragement and support regardless of the level of the course.

Disappointingly, we still saw a high "drop out" rate - where students either withdrew from the course, or attended only erratically, and eventually stopped coming to class all together. This is a typical pattern for these classes, but we were hoping that the incorporation of success strategies would help cut down on this occurrence. On the bright side, students who were failing the course were much more realistic about what had gone wrong, and seemed ready and willing to make adjustments to their approach the next time through the course. This is definitely a shift in the right direction. The typical reaction in the past was that the course was beyond them, and they would not be able to succeed. These students conveyed a much more positive attitude about trying the course again, and seemed to be coming to grips with the reality that a math course requires consistent effort and attention.

STUDENT SUCCESS SEMINAR # 1
Introduction/ Dealing with Anxieties

Welcome to the first Student Success Seminar!!! We hope that you find the activities and information helpful as well as inspiring as you begin to gain new insight into ways to achieve your full potential in mathematics.

ICEBREAKER: To begin with, you are going to work with one other person and share some thoughts and feelings about mathematics.

ACTIVITY 1: Pair up with one other student and make a list of words that come to mind that describe your feelings:

a) in math class
b) doing homework
c) studying for a test
d) taking a test

ACTIVITY 2: Get together with another pair. (There are now four of you now. This is math after all!) Share your list of words and come up with a list of common feelings.

ACTIVITY 3: Choose one person to represent your group as we share the words with the entire class.

Hopefully, you discovered that you are not alone with the feelings you have about mathematics. Next, we're going to investigate ways to possibly change the way you've been going about doing math !

Two Key Components in Dealing Effectively with Anxieties
Organization & Time Management

How you organize your work and arrange your time can have an enormous impact on both your anxiety level and success in your math course. You need to develop (or maintain) strategtes for: taking, refining and using class notes; working on practice exercises and indicating problem areas; organizing questions; preparing turn in work; preparing for tests; and responding to the inevitable feelings of frustration that you will feel during **the semester.**

ACTIVITY 4: Share with your partner information on what your most effective strategies have been in the following areas: 1) Taking and refining class notes; 2) Working on homework; 3) Keeping track of questions and/or problem areas.

Then brainstorm new ideas and approaches. Jot down in the space below the strategies/ideas that you feel might work best for you. Make a pact with your partner to try at least one of these strategies between now and the next seminar, and indicate clearly which one(s) you choose.

ACTIVITY 5: There are many approaches which, along with sufficient independent work, can help you maximize your learning and deal with frustrations during the semester. These include, but are not limited to the following: 1) Finding one or more partners to work with regularly outside of class; 2) Arranging a regular time each week to work in the Math Lab; 3) Arranging a regular time each week to work with the Computer Tutorial; 4) Setting up a time each week to review the material covered in the unit so far - even if there is not a test imminent.

Using your Work Sheet, find a block of time that you will commit to trying at least one new technique over the next two weeks. Share your choice with your partner.

ACTIVITY 6: If time allows, share the main ideas from above with another pair.

STUDENT SUCCESS SEMINAR # 2
Support Strategies/Formulating a Plan

ACTIVITY 1: Share what new approach you tried since the last seminar. Discuss whether or not you found it effective.

ACTIVITY 2: On the back describe how you prepared for Test # 1
Share this information with at least one other person.

ACTIVITY 3: On the back jot down answers to the following questions: Do you think your approach was effective ? Why ? Do you feel that you spent your time well ? Will you make any changes for the next unit ?
Share this information with at least one other person.

ACTIVITY 4: On the back jot down what you activly do when you get stuck with homework.
Share this information with at least one other person.

ACTIVITY 5: To receive effective help, you need to share where or why you are experiencing difficulty. The person giving you help needs to know what stage of the problem solving process to focus on. Maybe you have a very specific question. Maybe you don't understand when to use a particular rule.

On the back jot down ideas on what YOU could do to ensure that you will **be able to effectively communicate** your difficulties to a teacher, tutor or peer.

ACTIVITY 6: Group discussion

STUDENT SUCCEESS SEMINAR # 3
Test Analysis

This session will focus on how you fared on your first test, help you develop a plan for analyzing and using your test results, and help you decide if you need to change anything in your approach to preparing for the next test

ACTIVITY 1: Spend a few minutes answering the following questions: - Did you do as well as you wanted on test # 1? - Were you a good judge of where you lost points on the test? — How did you feel while you were taking the test? Confident? Anxious?

Share this information with at least one other person.

ACTIVITY 2: Spend a few minutes thinking about the following questions: - What action did (should) you take when you get your test back? - How can you benefit from any mistakes you made? - Could you have anticipated some of the problem areas?
Share this information with at least one other person.

ACTIVITY 3: Can you anticipate in advance what the next test will be like? Are there ways to keep track of areas to focus on while you are going through the unit? How do you determine if something is an essential idea (i.e. will undoubtedly appear on the next test)?
Share this information with at least one other person.

STUDENT SUCCESS SEMINAR # 4

Cooperative Learning Strategies

A key component in learning is to discuss mathematical ideas with other students and/or tutors and instructors. At the end of the second session, we focused on the importance of being able to articulate your areas of concern. In this seminar, we want to focus on what attitudes and/or techniques lend themselves to productive cooperative learning.

ACTIVITY 1: Think about how and when you currently work with others - either students, tutors or instructors. This can include both formal get togethers or short interchanges with others. You could have been working on particular algebraic concepts, or just sharing experiences/ frustrations/ strategies.

Think of an interaction that you felt was particularly satisfying and/ or helpful. Again, you could have figured out a particular algebraic concept, or just shared experiences, thus helping you relieve stress/tension/anxiety. Try to determine what components helped create a positive situation? What was your contribution? What did the other member(s) contribute?
Share your information with at least one other person.

ACTIVITY 2: What is the down side of working/ talking to others? Again think of a particular situation that you found frustrating and/or difficult to manage.
What steps did you take (or can you take) to change the situation?
Share with at least one other person.

ACTIVITY 3: Given the fact that you should incorporate at least some interactions with others into your learning plan, what do you as an individual need and/ or want to get out of these interactions? The clearer you can be about what you expect or want out of your different interactions, the more you will be able to guide the situation to meet your needs.

ACTIVITY 4: Whole Group Discussion

STUDENT SUCCESS SEMINAR # 5

This session was to provide participants an opportunity to talk informally about how their semester had gone so far, and to give us some feed back on whether they had found the seminars useful in helping them address their own learning and anxieties. Students seemed to appreciate the opportunity to talk to us and to each other.

STUDENT SUCCESS SEMINAR # 6
What Good is Math Anyway ?

This seminar will explore the skills one develops in the process of learning mathematics and why these skills are valued in the workplace. Following are three statements with a few questions to guide your explorations. Consider each statement individually, and then discuss your responses with the entire group.

1) Math opens doors to opportunities and students who stop their math studies too soon- close down options. *Consider why this statement is true, jot down ideas that could support this statement. Why do people in business value math training and experience for their employees?*

2) Skills that one acquires in learning how to be successful in mathematics are transferable to other areas of life and work ouside the classroom. *Consider what the specific skills and abilities are that carry through to other areas of life. What about processing and communication skills ?*

3) Success in math improves self esteem and confidence for the person as a whole. *Consider how this happens as one result of studying mathematics. Try to be specific in identifying the abilities necessary to do math and then how these abilities could contribute to improved confidence.*

STUDENT SUCCESS SEMINAR# 7
Preparing for the Final

So, this is finally the end! You've survived (and hopefully flourished) and now comes the final exam. During this seminar, you will explore how you plan to prepare for your final over the next week and a half. Then you 'll hear other students' strategies.

ACTIVITY 1: Think about the various resources you have available, i.e. the text, your class notes, the homework and computer lab. Decide how you expect to use each of these to prepare for the final. Is one of these more useful to you than another? What about friends and famiiy, can they also be resources? How?

ACTIVITY 2: consider the time you will have available over the days preceding Wednesday, May 10th. Take five minutes and prepare an actual schedule of times that you can and hopefully will devote to studying.

ACTIVITY 3: Will it be necessary to review every single topic you learned? Think about topics that are used cumulatively throughout the course. Maybe you can streamline how much material you need to go over and be efficient with your time. For the course you are taking, which topics might you not have to explicitly study?

ACTIVITY 4: Group Discussion

Gender Balance: Lessons from Girls in Science and Mathematics

Ann Pollina

If we stop trying to change girls and instead let a feminine approach to math and science inform our pedagogy, we will benefit boys, girls, and scientific inquiry.

Are we emphasizing the right issues when we talk about gender in the mathematics, science, and technology classroom? We are and we aren't.

The need for equitable treatment of girls and women is beyond dispute: Women are still greatly underrepresented in fields like physical sciences, engineering, and technology. As a matter of simple justice, there should be no field of academic inquiry closed to women.

The economic necessity argument is valid as well, particularly as women make up a greater share of our work force. And if we are to remain competitive in a world market, U.S. women must be well trained in mathematical, scientific, and technological fields.

But as important as these issues are, we cannot allow them to overshadow a third critical argument: the characteristic approaches that many girls and women bring to learning and scientific inquiry are vital to science and to science education.

Feminizing Scientific Inquiry

Too often in the past, we have focused on girls as if they were the problem. If not enough girls took math and science, we asked, "What is wrong with them, and how do we fix them?" How do we make them more aggressive, more analytical, more competitive, tougher, so that they will survive in these disciplines? For years, we gave girls what researchers at Smith College have called courses in remedial masculinity. Then we wonder why many girls lack self-esteem.

Instead of trying to change the way our female students approach mathematics, science, and technology, we need to study the ways they *do* learn. We need far more than a grudging willingness to change our pedagogy to simply accommodate girls' learning styles. We must be willing to learn from them. Even more important, we must come to believe that the messages they have for us are of real value.

The work of a number of women scientists demonstrates how profoundly a woman's perspective can enrich and enliven scientific study. The unusual insights of Barbara McClintock, for example, opened a new window through which to view the study of genetics. In 1983, McClintock won the Nobel Prize for her discovery that genes can rearrange themselves on a chromosome. The direction of her research was informed by a "feeling for the organism" (Keller 1983).

Jane Goodall and Dian Fossey, who revolutionized the understanding of primate behavior, did not hypothesize and then corroborate by observing a group of apes. Instead, they took a relational approach and focused on a single ape, tracing that primate's interactions. Their work has become a model for wildlife observation.

These women's formation of questions and approaches to problems represented a new way of looking at science: They introduced feelings and relationships into the discipline.

Ten Tips from Girls' Schools

How do we begin to learn lessons from girls in the classroom? The collective wisdom of teachers from girls' schools can provide all educators with insight into the learning styles of girls. Believing girls' schoo to be an untapped resource in our country's efforts to find ways to inspire young women to study mathematics, science, and technology, the National Coalition of Girls' Schools has sponsored three symposiums in these fields. Two were held at Wellesley College, in June 1991 and 1995; and a third in conjunction with the Dudley Wright Center at Tufts University in March 1993. Each brought together educators from public, independent, single-sex, and coeducational schools to examine research and proven strategies for teaching girls in the classroom.

Here are some of the messages from these workshops that I use in my high school classroom at Westover, an all-girls school in Connecticut.

1. Connect mathematics, science, and technology to the real world. My students remind me how much richer mathematics is when we do not divorce it from its history, its philosophical underpinnings, and its functions. Connecting any subject to the lives of real people and the good of the world is a powerful hook for girls.

Some specific exercises:

> Collect examples of decorative borders from different cultures. My geometry students study transformation and isometry using these.
>
> Establish links with other disciplines. Both the calculus and the European history classes at my school spend some time looking at the powerful effect Newton's laws of motion had on

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Photo by Gabriel A. Cooney

the thinking of the Enlightenment, and we share presentations between classes.

> Divide a class into groups and ask them what sort of mathematics a prehistoric hunter-gatherer clan might need to survive. You will have a wonderful discussion about the nature of mathematics.

2. Choose metaphors carefully, and have students develop their own. For years we have asked girls to *tackle* problems and master concepts using metaphors and real-world problems more closely tied to boys' life experiences. We have taught fractions using batting averages and presented parabolas as paths of missiles and rockets. Presenting images of mathematics and science that are comfortable and meaningful for girls is more than a sign of our current preoccupation with political correctness.

In my classes, I often ask students to create their own metaphors. A teacher may gain valuable insights into students' own perceptions of learning style by asking questions such as:

> "If math were a food, for me it would be ________ because ______."

My favorite response to this question was from a 9th grader entering Algebra I:

> If mathematics were a food, for me it would be a sandwich because sometimes I like what's on a sandwich and sometimes I don't. When there's too much stuff on a sandwich, I can't fit it in my mouth.

After reading this, I knew what that student needed in a math classroom. This exercise is the kind of "window on students' thinking" that the National Council of Teachers of Mathematics speaks of in its *Teaching Standards* (Leiva 1993–95). Dorothy Buerk, who teaches mathematics education at Ithaca College, has developed a wealth of these exercises (Buerk 1985).

3. Foster an atmosphere of true collaboration. Collaborative learning has become the classroom panacea of the '90s. Although a collaborative environment *is* attractive to many girls, pulling desks into a circle does not assure a collaborative, noncompetitive experience. Small groups work for girls if all members are taught to listen and are responsible for one another's learning. Some teachers insist that a true group project is one that no single group member can complete without the group's help.

4. Encourage girls to act as experts. When the teacher is the touchstone for all knowledge and answers, students rarely exhibit self-confidence. Only when the group is responsible for verifying its own logic and when students critique their own work and that of their peers do they begin to see themselves as scientists. The technique of the teacher refusing to act as an expert has been used successfully for over a decade in the SummerMath program at Mount Holyoke College. The program is designed for high school girls to address under-representation of women in mathematics-based fields.

5. Give girls the opportunity to be in control of technology. The issue of the expert is also a critical one in technology. Both boys and girls need to recognize the masculine cast of the computer industry. Taking any computer magazine and comparing the numbers of men and women pictured or mentioned in advertisements will stimulate a good class discussion.

At Westover, the computer room is staffed and serviced by students, usually from our Women in Science and Engineering (WISE) program. These girls are responsible for basic repairs, for teaching software, and for dealing with data emergencies. At times they teach the required computer literacy course. Girls need to see other girls in control of technology. In coed settings, an all-girls computer club may allow girls to develop more computer expertise.

6. Portray technology as a way to solve problems as well as a plaything. Girls use computers differently than do boys. Few girls will play with a computer just because it's there; most often girls use it as a tool, not a toy, and they need to see its relevance to their lives. One way to encourage girls to play on the computer is to emphasize the networking and communica-

For years, we gave girls courses in remedial masculinity. Then we wonder why many girls lack self-esteem.

tion capability. Single-use work stations can be isolating; pairing girls creates a comfortable atmosphere and stimulates discussion.

When asked to create a dream machine, girls want to create things that can help make our lives better. Cornelia Brunner and Margaret Honey of the Center for Children and Technology have crafted a variety of exercises to explore technological imagination (Brunner and Honey 1990).

7. Capitalize on girls' verbal strengths. Strong writers and good readers—both girls and boys—have valuable tools at their disposal. Yet, often, we are not creative enough in teaching them how to use those tools to their advantage in a mathematics or science classroom.

At the Coalition of Girls' Schools' symposiums cited earlier, teachers presented a wealth of situations in which they used writing. Students were encouraged to express the logic behind their solutions in essay or picture form. Proofs might be essays and well-constructed arguments with a minimum of mathematical notation.

My calculus students keep journals in which they reflect on their experiences in the course, comment on their progress, and set goals for themselves. Two possible journal questions:

> You died while doing your physics homework. Write your physics obituary.
>
> You are a spider on the wall of your room observing you doing your mathematics homework. What do you see?

8. Experiment with testing and evaluation. Assessment methods must reflect the research suggesting that girls do not think in linear right/wrong categories. Multiple-choice testing that requires forced choices or contains out-of-context questions and topics unrelated to real-world experiments make no use of girls' ability to synthesize, make connections, and use their practical intelligence. The work of Maryellen Harmon and her colleagues at Boston College's Center for the Study of Testing, Evaluation, and Educational Policy suggests that, for this reason, such assessments inhibit science education reform (Madaus et al. 1992).

Alternate strategies that do work well for girls include *embedded assessments*—activities in which students, usually working in groups, perform experiments, discover patterns, and arrive at hypotheses. A teacher circulates and observes student performance to evaluate them. Another form of assessment is the *circus*, where stations with reflection questions or experiments are set up around a room. Students go from station to station and are evaluated on the quality of their investigation at each.

9. Give frequent feedback, and keep expectations high. Because girls still may not expect to do well in mathematics and science, they tend to need more encouragement than do boys. The role of the teacher in praising students and verbalizing expectations is critical. Teachers at the girls' schools forums found it vital to provide frequent feedback in the form of homework checks, quizzes, and comments, thereby reinforcing students' belief in their control of the material. Many said they use this strategy to develop the kind of self-reliance that all students need to survive in an inquiry-based classroom.

10. Experiment with note-taking techniques. Girls are dutiful learners. They can get so absorbed in taking down every note and diagram that they are too preoccupied to take part in discussions. Teachers at the symposiums suggested a variety of techniques to counter this tendency, ranging from the "no note taking allowed" classroom to handing out copies of lecture notes or having them available on the computer. My algebra and geometry students take notes on reading material before coming to class. Most teachers at the symposiums included some standard note-taking situations so that students could learn this important skill.

Single-Gender vs. Coed Settings

The number of single-gender experiments in schools from New Hampshire to California bears witness to our interest in equity and our willingness to change. Those experiments are also steeped in controversy, and for good reason. If the purpose of such experiments is to divide girls from boys because girls can't compete in a "real" mathematics or science classroom, then our experiments, by conveying this message to girls, can do infinite harm. But if we begin these experiments believing that our female students have something to teach us, then what goes on in such a classroom can be more subtle and powerful than the absence of boys: it can be the empowerment of girls.

A recent, well-publicized experiment at the Illinois Mathematics and Science Academy in Aurora illustrates this point dramatically. In 1993, the academy, an experimental, residential school serving gifted and talented students, offered an all-girls' section on mechanics as part of a yearlong calculus-based physics course. David Workman, the physics teacher involved, did not simply import his usual classroom methods, but was willing to learn from the young women. He found some approaches successful—collaborative processes, hands-on experimentation, connection of abstract concepts with practical application—and he made these the cornerstone of his class. Then—and this is most vital—he tried to import these methods into his coed setting.

Workman made it clear to the girls that there was nothing wrong with the way they related to physics or to the physical world. His powerful message:

> I'm not just doing these things because you are incapable of learning physics the 'right way'; I am using the teaching methods that appeal to you because they are valid and important methods of scientific inquiry.

A report on the experimental section (Dagenais et al. 1994) showed it mirrored much of the atmosphere of all-girls' classrooms that other academy teachers describe: a spirit of co-learning, with both teacher and students feeling free to ask questions, admit mistakes, take risks, express confusion, and so on; a profound sense of responsibility for one's own learning and that of others; and a special rapport between and among the teacher and the students.

He Said, She Said

Workman's initial efforts to replicate this collaborative atmosphere in his coeducational classes was foiled: many boys tended to blurt out answers to questions posed to the class as a whole, with predictable results. The other students were suddenly diverted from collective problem solving and inquiry to an explain-the-answer-to-me mode. "In this environment," said Workman, "all except the boldest and fastest hesitate to be open, ask questions, and take risks."

To get around this problem, Workman has his students write down answers rather than speak them. Then, moving from table to table, he confirms whether an answer is right or whether the student or group of students needs to work through the problem again.

These difficulties notwithstanding, the single-gender experiment has already helped to level the playing field. Last year, for example, girls performed on a par with their male peers (in prior years their performance declined relative to boys' as the semester went on); more girls enrolled in and successfully completed the yearlong physics course than ever before; and girls in the single-gender section gained more self-confidence than did those in coeducational sections.

Workman and his colleagues plan to further analyze the results of the experiment. "We're going to take what we learned and think harder about how we can preserve the strengths of both male and female modes of learning in mixed classes in order to benefit everyone," he said.

In single-gender class experiments, the culture that surrounds a class is as vital as teaching itself. If we are willing to stop trying to change girls and ready to let a feminine approach to science inform our pedagogy, we may see some exciting results for boys and girls and for science and technology. ■

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Ann Pollina is Dean of Faculty and Head of the Mathematics Department at Westover School, P.O. Box 847, Middlebury, CT 06762-0847. She is one of the principal investigators of a statewide study aimed at improving gender equity in science, engineering, and mathematics in Connecticut.

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Toward a Challenging Future

A Practitioner's Guide for Student Career Exploration in New York State

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Part Five: Additional Resources 5

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Internet resources for Women's Studies

by Mary Glazier

A list of electronic resources

As an interdisciplinary field, Women's Studies necessarily crosses into a wide number of overlapping subject areas. Though these distinctions were not always easy to make, I have undertaken the compilation of an introductory guide as a way of presenting sources that deal with the general relationship of women to various disciplines or that present women's perspectives on specific cultural institutions. The following list of electronic resources for Women's Studies was created through the use of gophers, Archie, Veronica, and OPACs. Resources are divided into discussion groups (listservs precede Usenet groups), electronic journals, OPACs, electronic texts, fee-based services, gopher sites, and other resources indispensable for identifying listservs in any given subject area. It is my hope that, with the following resources as a starting point, women will be able to pursue their own interests to identify sources of information specific to their needs and that this guide will also highlight areas where resources are needed (such as electronic journals) so that efforts may be directed to make complete access to Women's Studies resources a reality.

Electronic mail discussion groups (listservs)

The following is a selective list of listservs on general topics relevant to Women's Studies.

EDUCOM-W is a moderated list to facilitate discussion of issues in technology and education that are of interest to women. LISTSERV@BITNIC.EDUCOM.EDU

FEMAIL is a moderated list which provides a shared communication channel for feminists around the world. Women and men are welcome to join. FEMAIL-REQUEST@LUCERNE.ENG.SUN.COM

FEMECON-L listserv for feminist economists. A source of information and answers to questions on economics with feminist perspectives. LISTSERV@BUCKNELL.EDU

FEMINISM-DIGEST. Issues of feminist organization, experience, and philosophy are discussed. This is a collation of the articles that appear on Usenet's SOC.FEMINISM list, sent out about once a week. Write to Feminism-

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Digest@NCAR.UCAR.EDU for subscription.

FEMINIST, owned by the Feminist Task Force of the American Library Association, offers discussions of issues such as sexism, racism, and ethnic diversity in librarianship and pornography, censorship, and intellectual freedom in libraries. LISTSERV@MITVMA.MIT.EDU

FEMISA is a list for discussion of feminism, gender, women's international relations, world politics, international political economy, and global politics. One of the purposes of the list is the exchange of documents (course outlines, articles, etc.) related to its topics. LISTSERV@CSF.COLORADO.EDU

FEMREL-L a list providing a great deal of conversation about women, religion, and feminist theology. LISTSERV@UMCVMB.BITNET

FIST (feminism in science and technology) is an unmoderated list for discussion of feminism and science and technology. LISTSERV@DAWN.HAMPSHIRE.EDU

GENDER is a moderated list devoted especially to discussion of issues pertaining to the study of communication and gender. COMSERVE@RPITSVM

H-WOMEN is an international forum for scholars and teachers of women's history. LISTSERV@UICVM.BITNET

KOL-ISHA is a moderated list for questions and issues concerning women's roles in Judaism. LISTSERV@ISRAEL.NYSERNET.ORG

MEDFEM-L is a list for feminist medievalists. LISTSERV@UWAVM.U.WASHINGTON.EDU

SWIP-L is an information and discussion list for members of the Society for Women in Philosophy and others interested in feminist philosophy. LISTSERV@CFRVM.CFR.USF.EDU

SYSTERS provides a forum for female computer scientists for the exchange of research and career information. Contact Dr. Anita Borg at SYSTERS-REQUEST@DECWRL.DEC.COM

WIM-L (Women's issues in Music Librarianship). Contact Laura Gayle Green at LGREEN@IUBVM.BITNET

WIPHYS is a moderated list for issues of concern to women in physics. LISTSERV@NYSERNET.ORG

WISENET is a list for women in science, mathematics, and engineering. LISTSERV@UICVM.UIC.EDU

WMN-HLTH women's health electronic news-line, started by the Center for Women's Health Research. LISTSERV@UMDD.UMD.EDU

WMST-L serves academic and professional needs of people involved in Women's Studies teaching, research, libraries, and programs. LISTSERV@UMDD.UMD.EDU

WOMEN a general purpose list for all women's groups and areas of interest for women and their friends. WOMEN-REQUEST@ATHENA.MIT.EDU

Usenet newsgroups

Methods of accessing Usenet newsgroups vary from system to system; the best approach is to ask your system administrator.

ALT.FEMINISM is often a venue for confrontational debates about feminism.

SOC.WOMEN offers an unrestricted range of topics, mostly non-academic, of relevance to women's lives.

SOC.GENDER-ISSUES. Discussion of gender issues of interest to women.

SOC.FEMINISM. A moderated list where issues of feminist organization, experience, and philosophy are discussed. (Also available through the Internet as FEMINISM-DIGEST@NCAR.UCAR.EDU.)

Electronic journals

AMAZONS INTERNATIONAL. An electronic journal for and about "physically and psychologically strong, assertive women who are not afraid to break free from traditional ideas about gender roles and femininity." Gopher to gopher.cic.net. Select "Electronic Serials." Select "General Subject Headings" then "Culture."

OPACs (online library catalogs)

The following OPACs offer access to library collections which are known for strong Women's Studies collections. Most gopher systems provide access to library catalogs however, telnet addresses are listed below for those who wish to connect directly to these catalogs. (Note: some systems are not entirely compatible with telnet access; for some systems you may need to type TN3270 or TNVT100 instead of "telnet." If in doubt, check with your system administrator to determine which command you should use.)

BROWN. Telnet to BROWNVM.BROWN.EDU. At the BROWN logon screen: TAB to command field. Enter DIAL JOSIAH. TAB to the JOSIAH choice on the screen.

NORTHWESTERN UNIVERSITY. Telnet to LIBRARY.UCC.NWU.EDU. At the Database Selection Menu, enter NCAT.

TEXAS WOMAN'S UNIVERSITY. Telnet to VENUS.TWU.EDU. At the Username: prompt, type IRIS. Press RETURN several times when prompted to.

UNIVERSITY OF CALIFORNIA AT IRVINE (MELVYL). Telnet to MELVYL.UCOP.EDU. When asked for terminal type, enter VT100. Press RETURN when prompted to. Type START LOOK for easy to use library system.

UNIVERSITY OF NORTH CAROLING AT GREENSBORO. Telnet to STEFFI.UNCG.EDU. When prompted for Username, type JACLIN.

UNIVERSITY OF MARYLAND. Telnet to VICTOR.UMD.EDU. Select PAC from the Available Services Menu. Select 5 for VT100. Press RETURN twice.

Electronic texts

The Women Writers Project provides texts of some 200 literary works produced by women from pre-1830 for British, Scottish, Irish and Welsh women writers. It includes works from other colonies. The listserv (WWP-L) offers a forum for discussion of these works (LISTSERV@BROWNVM.BROWN.EDU).

Fee-based services

WON, the Women's Online Network, was founded by Carmela M. Federico and Stacy M. Horn in January 1992 and is concerned with developing strategies to improve the position of women in our society. The network distributes prominent and essential information regarding concerns to women, and aids in the coordination of useful political action. Membership entails a yearly fee of $20, which is negotiable if necessary. To join, contact the co-founders at (212)255-3839 or (212)989-8411 or e-mail to carmela@echo.panix.com or horne@echo.panix.com.

WIRE, Women's Information Resource and Exchange, due to begin operation in 1994, will be an international interactive computer network providing women with a centralized source of women-oriented information and conversation. For information contact WIRE at (415) 615-8989 or send e-mail to info@uivc.net.

Gopher Sites

INFOGOPHER.YORK.AC.UK includes Internet guides as well as bibliographies on Women's Studies and Feminism. Select "Library," then "Subjects," then "Women's Studies." The following guides are recommended, and are available at this site under "Internet Guides":

Balka, Ellen. WOMEN'S ACCESS TO ON-LINE DISCUSSIONS ABOUT FEMINISM.

Hunt, Laura. GUIDE TO WOMEN'S STUDIES/FEMINIST INFORMATION ON THE INTERNET.

Turek, Kathleen and Judith Hudson. ELECTRONIC ACCESS TO RESEARCH ON WOMEN: A SHORT GUIDE

INFO.UMD.EDU. The University of Maryland's gopher, InForM, houses the Women's Studies Online Database. Divided by subject, it includes calls for papers, employment opportunities, feminist film reviews, women's health information, poetry, fiction, political information, and more. Select "Educational Resources," then "Women's Studies."

HAFNHAF.MICRO.UMN.EDU The University of Minnesota Women's Center gopher site offers access to information about counseling, education, family relations, health, finances, housing, research, violence, current events, scholarships, grants, financial support, and much more. Select "UofM Campus Information," then "University of Minnesota Women's Center."

Other Resources

The SOC.FEMINISM FAQ (Frequently Asked Questions) provides "an informal compilation of potential resources for women" and includes feminist organizations, related organizations, feminist and women-oriented publications, feminist and women-oriented electronic mailing lists, and a list of catalogs/bookstores. It is available through FTP to rtfm.mit.edu as "resources" under /pub/usenet/news.answers/feminism.

Write to request catalogs of resources on educational equity, gender equity, cultural diversity, child care, and related issues.

AVA (American Vocational Association)
1410 King Stree
Alexandria, VA 22314
1-800-826-9972

WEEA Publishing Center
Education Development Center
55 Chapel Street
Newton, MA 02158
(617) 969-7100
1-800-225-3088

Free Spirit Publishing
400 First Avenue North
Suite 616
Minneapolis, MN 55401
1-800-735-7323

Center for Research on Women
Wellesley College, 106 Central Street
Wellesley, MA 02181
(617) 283-2510

Center on Education and Work
964 Educational Sciences Building
1025 West Johnson Street
Madison, WI 53706
1-800-446-0399

NCRVE (National Center For Research in Vocational Education)
Materials Distribution Service
Western Illinois University
46 Horrabin Hall
Macomb, IL 61455
1-800-637-7652

Women Work! National Network for Women's Employment
1625 K Street, NW, Suite 300
Washington, DC 20006
(202) 467-6346

National Women's History Project
7738 Bell Road
Windsor, CA 95492-8518
(707) 838-6000

AAUW (American Association of University Women)
1111 16th Street, NW
Washington, DC 20036-4873
1-800-225-9998

National Association for Education of Young Children
1834 Connecticut Avenue, NW
Washington, DC 20009
1-800-424-2460

Wisconsin Department of Public Instruction
125 South Webster Street
Madison, WI 53707-7841
1-800-446-0399

African American Images
1909 W. 95th Street
Department W/S '96
Chicago, IL 60643
(312) 445-0322

Network
300 Brickstone Square, Suite 900
Andover, MA 01810
1-800-877-5400

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MEDIA CATALOG

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NYS Career Options Institute
Resource Center

This media catalog is a publication of the New York State Career Options Institute, which is directed by Dr. Craig P. Flood, Ed.D. It is federally funded under Vocational Education Act grant #8020-95-0210 through the New York State Education Department, Project Coordinator, Mary Ann Etu, Vocational Gender Equity Coordinator.

The Career Options Institute is implemented by the Division of School Support Services/
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The Compliance Officer for Title IX and Section 504 is the District Superintendent, available from 8:00 am to 4:00 pm weekdays at the above address or at 518-456-9215.

Media Use

New York State educators are encouraged to borrow and use media from the New York State Career Options Institute. By listing media here in our catalog, however, we are not necessarily indicating that these are the best pieces of media available. As with any piece of media we highly recommend that you preview it before use for applicability, quality, datedness, etc. While we have indicated the kind of audience for which these may be intended (level), this does not necessarily mean they are appropriate for all such audiences.

Media Loan Policies and Procedures

The following policies and procedures apply to the loan of media from the New York State Career Options Institute.

1. Ordering is on a first-come, first serve basis. Because of the volume of requests received, we suggest that you book films and videos as far in advance as possible. Up to three (3) maybe borrowed at one time.
2. All materials are loaned free of charge.
3. Items will be shipped UPS at no cost to the borrower. Borrowers are responsible for return shipping and insurance charges via **UPS or First-class mail.** (see details under Returning Media, page 2)
4. Media will be loaned for a 3 week period which includes shipping time. In order to accommodate all users, materials should arrive back at the NYS Career Options Institute **on or before** the due date.
5. Borrowers with overdue materials may not borrow more materials until outstanding materials are returned.
6. Lost materials will be billed to borrowers at purchase price.
7. Borrowers are asked to complete the "Media Evaluation Form" enclosed with each piece of media.

Ordering

Media may be ordered by:

1. Calling the NYS Career Options Institute at least seven (7) days in advance at 518-786-3230.

(or)

2. Sending a copy of the order form at the back of this catalog for each piece of media request at least ten (10) days in advance to:

New York State Career Options Institute
attn: Research Center Coordinator
6 British American Boulevard, Suite G
Latham, New York 12110-1402

(or)

3. Faxing order form to 518-786-3245

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Returning Media

Materials must be returned immediately after use via **United Parcel Service (UPS) or First Class Mail.** Because many of the pieces of media are very tightly scheduled, materials must be returned so they arrive **on or before** the due date. This means you should allow 2-3 days depending on your location. Please be considerate of other borrowers!

- **Materials sent in the US Mail at any rate besides First Class (for example, library rate) move very slowly. Please do not use any method besides UPS or First Class.**

Materials should be insured at the following rates:

Films (under 30 minutes running time)	$400.00
(over 30 minutes running time)	$600.00
Videotapes	$300.00
Filmstrips/Tape: Slide/Tape	$100.00

Please direct all correspondence to:

Resource Center Coordinator
NYS Career Options Institute
6 British American Boulevard, Suite G
Latham, New York 12110
(518)786-3230
FAX (518)786-3245

NYS Career Options Institute
Resource Center
Capital Region BOCES
6 British American Boulevard, Suite G
Latham, New York 12110
(518)786-3230
FAX (518)786-3245

Media Request

Submit order at least 10 days in advance. Because of the large volume of requests we receive, it is mandatory that materials be returned **immediately after use** via **UPS** or **First Class US Mail**.

Name ______________________________ Date ______________

School/Organization ______________________________

*** Shipping Address:** ______________________________

____

Telephone - Work ( )______________ Home ( ) ______________

Requests: **Please indicate in priority order**

1. **Title** ______________________________
   format: ½" video 16mm film other
   Use date: ______________ Alternate date: ______________

2. **Title** ______________________________
   format: ½" video 16mm film other
   Use date: ______________ Alternate date: ______________

3. **Title** ______________________________
   format: ½" video 16mm film other
   Use date: ______________ Alternate date: ______________

* **May not be a PO Box for UPS shipping**

ALPHABETICAL LISTING OF MEDIA

ANOTHER HALF
Color, 27 minutes, 1/2" video (VHS)
ETR (1985)
Level: Junior high, senior high

This video helps young men broaden the boundaries of their masculinity. Discussion topics include sex role stereotyping, sexual responsibility, and life planning.

ARE YOU READY? A DOCUMENTARY VIDEO ABOUT CAREER PLANNING FOR YOUTH
Color, 30 minutes, 1/2" video (VHS)
J.C. Penney Co., Inc. (1990)
Level: Senior high, adult

Designed to help young people realize that they have career options and can best take advantage of those options by setting goals and developing long-range career plans. Holly Robinson from the television show "21 Jumpstreet" narrates. Has discussion guide.

BIAS AWARENESS IN A MULTICULTURAL WORLD
Color, 2 videotapes, 25 minutes each, 1/2" video (VHS)
Houghton Mifflin Co. (1991)
Level: Senior high, post secondary, adult

The purpose of this video program is to teach students to inquire, self-examine, and converse with each other in an intelligent manner concerning sex bias. An instructor's guide is included.

BLACK WOMEN ON THE MOVE
Color, 1/2" video (VHS), 30 minutes
California Dept. of Education (1991)
Level: Senior high, post secondary, adult

Viewers of this video are introduced to several black women who ar established in or are preparing for traditional and nontraditional careers. The women speak about their dreams and aspirations, challenges they have faced, and their hopes for the future. This video can be used as a tool to initiate discussion about successful career planning and personal development.

BREAKING OUT: CAREER CHOICES FOR TEEN-AGE PARENTS
Color, 17 minutes, 1/2" video (VHS)
Vocational Studies Center, Wisconsin (1987)
Level: Teens, adults

Focuses on the why and how of choosing higher wage occupations and the special needs of teen-age parents. Very realistic; uses some interviews with both hindsight and a look forward the future.

BREAKING STEREOTYPES: TEENS TALK ABOUT RAISING CHILDREN
Color, 15 minutes, 1/2" video (VHS)
Educational Equity Concepts (1988)
Level: Senior high, Child Care Teachers

This videotape questions the sex-role messages children receive. The video juxtaposes pictures of children in day care settings where girls play actively and boys are nurturing. Teen mothers eloquently discuss strategies for raising their children free of gender-role limitations. Has study guide.

BREAKING THE CYCLE
Color, 10 minutes, 1/2" video (VHS)
WOW (1995)
Level: Adults, Women, Nontraditional Career Counselors, GED Program Participants

Breaking the Cycle tells the stories of three women who have moved from undereducation, low-paying jobs or welfare to quality, traditional or nontraditional employment through women's educational and vocational programs. The results are greater levels of confidence, motivation and economic security for themselves and their children. The stories of these women provide clear examples of the intergenerational impacts when mothers invest in their own futures through education. In telling their stories, provide descriptions of their own obstacles, success, insights and advice for other women. Has Guide.

BREAKING THE SILENCE: EQUITY AND EFFECTIVENESS IN COLLEGE TEACHING
Color, 20 minutes, 1/2" video (VHS)
NAK Productions (1990)
Level: Senior high, post secondary, teachers, administrators

With increasing numbers of women, people of color, people with disabilities, and other diverse populations entering higher education, professors must learn how to effectively teach all students. The Sadkers analyze how gender bias affects classroom dynamics and suggest ways to improve teaching methods.

CAREER CHOICES IN VOCATIONAL EDUCATION: IS THIS JOB FOR ME?

Color, 20 minutes, 1/2" video (VHS)
Ohio Department of Education, Division of Vocational and Career Education, Columbus (1989)
Level: Junior high, senior high

This video shows both females and males in occupations that are nontraditional for their sex and gives advice to persons considering nontraditional careers. (Also recorded on this cassette: The Equity Game and Florida's Apprenticeship Program: A License to Success.)

CAREER PLANNING FOR YOUTH - GOLDEN RULE NETWORK

Color, 2 hours, 1/2" video (VHS)
J.C. Penney Co., Inc. (1990)
Level: Educators

Educates viewers on the present status of career planning for youth. It is intended to generate discussion and provide new directions in the area of career planning. This tape should be used in conjunction with the videotape. Are You Ready? which comes with a discussion guide.

CATCHING A WAVE TO THE FUTURE

Color, 9 minutes, 1/2" video (VHS)
Maui Community College (1985)
Level: Junior high, high school, adults

Three male nurses describe their work and explain how they prepared for their nontraditional careers.

CHANGING CHANNELS: HIGH TECH CAREERS FOR WOMEN - CURRICULUM AND VIDEO SERIES

Color, 1/2" video (VHS)
Missouri State Department of Education, Department of Elementary and Secondary Education (1990)
Level: Senior high school, adult

This satellite video teleconference series educates potential students about the following high tech careers: *Laser Technology* (9 minutes), *Drafting and Computers* (9 minutes), *Electronics and Robotics* (8 minutes), and *Aviation and Avionics* (8 minutes). The tapes in each set show students doing hands-on work at a vocational school or community college and spotlights a panel consisting of females working in that occupational area. Each set of tapes is accompanied by a Curriculum Guide of class activities and lesson plans.

CHANGING CHANNELS TRAVELS THE INFORMATION HIGHWAY
Color, 47 Minutes, 1/2" video (VHS)
Careers Unlimited (1994)
Level: Senior high school, adults, teachers

This video features successful women involved with technology associated with long distance learning and computer networking at AT&T Bell Laboratories, Sprint, Silicon Graphics, Oracle Corporation, Prodigy, Pac Bell, MIT and more. Changing Channels V demonstrates innovative uses of the information highway through the Internet and other online services. *Changing Channels* also features Missouri schools that are currently involved with the Internet and distance learning and exposes female students to the courses that will prepare them for this high-tech industry including electronics, computer programming, math and science.

CHEMISTS IN THE CLASSROOM
Color, 12 minutes, 1/2" video (VHS)
American Chemical Society (1990)
Level: Adults

This video produced by American Chemical Society, is a videotape offering guidance to scientists planning to visit a K-12 classroom for the first time. It also offers preparation suggestions to the classroom teacher.

CHOICES
Color, 23 minutes, 1/2" video (VHS)
Indiana Commission on Vocational and Technical Education (1988)
Level: Senior high, parents

Choices is designed to stimulate discussion regarding career planning, occupational choice, and gender issues. The video is a drama featuring a group of high school students who must each confront individual problems caused by gender inequity and gender/sex role stereotyping. Their discussion and solutions may cause viewers to examine their own gender values and identify the implications of those values within the family, school, and community. Has users guide.

CHOICES IN HEALTH: PERSONAL CAREER DECISIONS
Color, 10 minutes, 1/2" video (VHS)
NYS Education Department (1989)
Level: Junior high, senior high

This video emphasizes the need for students to make personal career decisions. It is targeted to youth and focuses on health-related careers.

A CLASS DIVIDED
Color, 60 minutes, 1/2" video (VHS)
PBS (1986)
Level: Post secondary, adult

It was nearly 20 years ago that an innovative teacher attempted a daring experiment in her elementary school classroom. To evaluate how racial stereotypes affect young children, Jane Elliott divided her class between these with blue eyes and those with brown and gave blue-eyed children preferential treatment. This classic program presents the long-term effects of racial stereotyping in schools and suggests how new approaches can make a positive difference with students and teachers. The video comes with a Facilitator's Guide prepared by Jane Elliott. Produced by Yale University Films, New Haven, CT, 1985. Has guide.

COARSEWORK: CONFRONTING SEXUAL HARASSMENT
Color, 25 minutes, 1/2" video (VHS)
Rider College (1990)
Level: Senior high, college

This video presents a scenario in which a female college student is sexually harassed by her professor. The accompanying discussion guide provides questions addressing the issues presented in each of the scenes.

COMPUTER EQUITY EXPERT PROJECT
Color, 16 minutes, 1/2" video (VHS)
Women's Action Alliance and The Computer Equity Expert Project (1993)
Level: Educators, teachers

Reviews the Computer Equity Expert Project headed up by Jo Sanders. Interviews participants, trainers and students who express the importance of gender equity in career exploration and the effective role of mentors in young women's lives. Highlights some successful strategies that teachers have use to get female students more interest in math, science and technology.

CONNECTING THE PAST WITH THE FUTURE: WOMEN IN MATHEMATICS AND SCIENCE - PART ONE - MARY SOMERVILLE
Color, 50 minutes, 1/2" video (VHS)
Western Illinois University, Women's Center (1993)
Level: Junior high; senior high

This video teleconference features Mary Somerville, a Scottish science writer and astronomer born in 1780. History of this women scientist and her contributions to the math and science field are highlighted. Present day role models including an electrical engineer and a space scientist are interviewed. Has guide.

CONNECTING THE PAST WITH THE FUTURE: WOMEN IN MATHEMATICS AND SCIENCE - PART TWO - FLORENCE BASCOM

Color, 50 minutes, 1/2" video (VHS)
Western Illinois University, Women's Center (1994)
Level: Junior high, senior high

This video teleconference features Florence Bascom, an American geologist born in 1862. Her first great accomplishment was to be the first women to receive a doctorate in geology from John Hopkins University. She went on to blaze a trail for other women by becoming the first female geologist to work for the US Geological Survey and founded the geology department at Bryn Mawr.

CONNECTING THE PAST WITH THE FUTURE: WOMEN IN MATHEMATICS AND SCIENCE - PART THREE - MARIA GOEPPERT-MAYER

Color, 50 minutes, 1/2" video (VHS)
Western Illinois University (1994)
Level: Junior high, senior high

This video teleconference focuses on women in physics and features the historical figure of Maria Goeppert-Mayer, and American, German-born nuclear physicist and winner of the Nobel Prize. Present day role models include a doctoral student in health physics and a health physicist. Has guide.

CROSSING THE LINE

Color, 30 minutes, 1/2" video (VHS)
Kitchner-Reese (1992)
Level: Junior high, senior high

A video and curriculum designed to be used with students in middle school, junior high schools and high schools. It uses vignettes to show the wide range of sexual harassment behaviors.

DNA DETECTIVE - MOLECULAR BIOLOGIST LYDIA VILLA-KOMAROFF

Color, 60 minutes, 1/2" video (VHS)
Films for the Humanities & Sciences (1995)
Level: Junior high, senior high

In this program, Villa-Komaroff and her colleagues research a protein which Villa-Komaroff believes may be implicated in a rare and devastating condition called megalencephaly, in which the fetal brain grows abnormally large. But it's an unproven theory, and Villa-Komaroff has already invested ten years of work in developing it. As she comes to a crucial experiment, Villa-Komaroff knows that "things just don't always happen the way you want them to" in science. The profile offers a meditation on the value of failure as a tool in science --- and a vision of a successful woman scientist.

DREAMS OF EQUALITY
Color, 28 minutes, 1/2" video (VHS)
Eastern National Park & Monument Association (1994)
Level: High school, college, adults,

The video centers around the re-creation of the First Women's Rights Convention. It tells the story of the Convention through the interactions between a sister and a brother from 1848 to the 1860's. In addition to the historical segments, vignettes of young people discussing their views of the women's rights struggle provides a contemporary relevance for the audience.

DREAMS OF FLYING
Color, 27 1/2 minutes, 1/2" video (VHS)
Circle Project, California State University (1989)
Level: Junior high, senior high, adults

A young Hispanic woman and her family struggle with issues of the importance of education, nontraditional career options, family values, and adult literacy. Characters are realistic and well-portrayed. List of discussion questions available.

DREAMWORLDS
Color, 55 minutes, 1/2"video (VHS)
Foundation for Media Education (1992)
Level: Women, postsecondary, senior high

There has been a great deal of concern in recent years about the negative and dangerous representations of women contained in music videos. This tape presents an accessible way to be able to talk about these representations and the role that they play in how young people, especially think about and behave in everyday life with regard to sexuality and gender. It uses images of music videos themselves, rearranged and recontextualized, to highlight the precise nature of this world.

EARTH EXPLORER - GEOPHYSICIST MARCIA MCNUTT
Color, 60 minutes, 1/2"video (VHS)
Films for the Humanities & Sciences
Level: Junior high, senior high

This profile follows McNutt as she studies these hidden forces, and it travels with her to Tahiti where she and her colleagues examine xenoliths, rock fragments thrown up from the earth's mysterious interior. The program also shows the human face of a life in science. McNutt is a single parent, widowed five years ago when her husband suddenly died, leaving her with three young daughters. Her life involves a constant balancing of research and teaching at MIT, where she's a tenured professor in the Earth Sciences Department, with children's piano lessons and birthday parties.

ENGINEERING: A CAREER FOR WOMEN

Color, 20 minutes, 1/2" video (VHS)
Purdue University (1990)
Level: Junior high, senior high

The twenty minute presentation is designed to interest young women in the field of engineering by giving them a look into the lives of women engineers.

EQUITY IN EDUCATION: GENDER BIAS IN THE COLLEGE CLASSROOM

Color, 11 minutes, 1/2" video (VHS)
University of California (1994)
Level: Educators, Administrators, Post Secondary

This video was designed to be an instructional tool in workshops for educators examining issues of gender in their teaching. The video shows three separate scenes in which instructors and students are portrayed in very typical interactions. These scenes provide good examples for discussion and analysis by participants. The classroom topics are engineering subjects but the interactions are not discipline specific so the video is applicable to any classroom situation.

THE EQUITY GAME

Color, 15 minutes, 1/2" video (VHS)
Broward County School District, Ft. Lauderdale (1989)
Level: Junior high, senior high

The Equity Game uses a "What's My Line" context to present nine panelists who hold nontraditional occupations: firefighter, law enforcement officer, bank teller, cosmetologist, secretary, kindergarten teacher, engineer, nurse, veterinarian. Provides excellent occupational and educational information. (Also recorded on this cassette: The Equity Game and Florida's Apprenticeship Program: A License to Success)

FAILING AT FAIRNESS

Color, 20 minutes, 1/2" video (VHS)
Dateline, CBS News, New York (1992)
Level: Teachers, educators, administrators, senior high

Following the research published in the AAUW's report "How Schools Shortchange Girls", Jane Pauley's cinema verite of gender-biased classroom interactions are analyzed by Myra and David Sadker. This team of researchers point out how girls are overlooked and become invisible in the classroom.

FAIRER SEX

Color, 16 minutes, 1/2" video (VHS)
Corvision (1993)
Level: Senior high students, post secondary, adults

ABC's "Prime Time Live" set out to discover whether there are daily differences in being a male versus a female in today's American society, particularly in the workplace. With the aid of hidden cameras and microphones, two professional tester in their late 20s, helped in the investigation. They posed as two people who had just moved to a major urban center, two people getting established, looking for jobs, shopping for cars, even asking about playing golf at a public golf course. The results of their report about our attitudes and their consequences may surprise you.

FOCUS FOR ACTION: NATIONAL CAREER DEVELOPMENT GUIDELINES

Color, 15 minutes, 1/2" video (VHS)
NOICC (1991)
Level: Teachers, administrators, career guidance program coordinators

This was designed for use by administrators and program coordinators to demonstrate how the Guidelines can be implemented in educational, community, and business organizations to improve career development programs for youth and adults. It also identifies steps the viewer can take to improve career development programs.

FOLLOW YOUR DREAM

Color, 6 minutes, 1/2" video (VHS)
Arizona Department of Education, Vocational Education Equity Office (1988)
Level: Junior high, senior high

This energetic music video gives a message that girls need to plan their careers. Teenage girls are depicted at home and at school visualizing themselves in careers from firefighters to record producers. Good for junior and senior high audiences.

FUTURES² SERIES

Color, 12 videos, 15 minutes each, 1/2" video (VHS)
PBS (1992)
Level: Junior high, Senior high

Futures² with Jaime Escalanta is an educational video series created to motivate students in grades 6-12 to study math and science. Through classroom scenes with Mr. Escalante and hundreds of filmed on-the-job interviews with professionals, technicians, researchers, designers, and others, students are able to focus on how widely math and science are used in the "real world". Each 15 minute episode links classroom math and science to exciting and rewarding careers. Careers highlighted in the Futures² series include: Advanced Transportation, Animal Care, Environmental Science & Technology, Fitness and Physical Performance, Future Habitats, Graphic Design, Industrial Design, Mass Communication, Meteorology, Ocean Exploration, Personal Communication, Renewable Energy. Teacher's guide accompanies videos.

FUTURES: FROM HIGH SCHOOL TO HIGH TECH

Color, 15 minutes, 1/2" video (VHS)
Northwest Center for Sex Equity (undated)
Level: Senior high, teachers, adults

Presents interviews and teaching segments which stress the connection between quality and equality in education and focus on trends which will shape the future.

GENDER: THE ENDURING PARADOX

Color, 58 minutes, 1/2" video(VHS)
PBS (1991)
Level: Adults

Today, less than 13% of all American families fit the model of female homemaker and male breadwinner. Yet the wielding of male power in most institutions remains a formidable obstacle to the democratization of gender. Are men and women really different? This program explores the subject of gender in American society, from the formation of childhood gender roles to socially - constructed notions of masculinity and femininity, exploring the validity of popular ideas about men and women illustrating the paradox and contradictions of gender.

GENDER SHOW
Color, 30 minutes, 1/2 " video (VHS)
PBS (1992)
Level: Junior high, senior high

Club Connect exposes stereotypes by sensitizing teens to the similarities and differences between guys and gals. Features include men and women in non-stereotypical jobs. A look at the sensitive issue of date rape is also included.

GENDER SOCIALIZATION
Color, 60 minutes, 1/2" video (VHS)
RMI Media (1992)
Level: Senior high, adults

Ways in which women are challenging gender socialization with race and class.

GETTING READY
Color, 10 minutes, 1/2" video (VHS)
Colorado Community College and Occupational Education System (1988)
Level: Junior high, senior high, adults, teachers

Women training for and working in nontraditional jobs are interviewed about their careers. Suggestions are made on how to investigate and prepare for nontraditional jobs. Recommended for use with females from middle school through adults; also teachers, parents, and employees.

GIRLS CAN!
Color, 16 minutes, 1/2" video (VHS)
AAUW (1994)
Level: Teachers, administrators, community members

Highlights the results of the 1991 AAUW Study - "Shortchanging Girls, Shortchanging America." Interviews girls by questioning them about gender-role stereotypes and their career paths. Suggests ways educators and community members can get involved to eradicate sex role stereotyping by highlighting successful programs. Has guide.

GIRLS, SCIENCE AND MATHEMATICS
Color, 17 minutes, 1/2" video (VHS)
AAAS (1991)
Level: Parent groups, teachers, CBO leaders, administrators

This video discusses issues related to girls in science and mathematics - why they fall behind. It describes the AAAS Girls & Science program which was designed to counteract these problems. Careers in science, mathematics and engineering are highlighted.

GO FOR IT: PERSONAL CAREER DECISION*

Color, 8 minutes, 1/2" video (VHS)
New York State Department of Education (1988)
Level: Junior high, Home and Career Skills students

This computer-animated video emphasizes the need for students to make personal career decisions. It is targeted to youth and especially designed for use by Home and Career Skills teachers. Accompanying materials expand on the motivational message. (*English and Spanish versions)

GUIDE TO NONTRADITIONAL TRAINING FOR WOMEN

Color, 20 minutes, 1/2" video (VHS)
Louisiana Office of Women's Services (1995)
Level: Trainers, Adults, administrators

This video highlights the nontraditional training programs being implemented in Louisiana. The different components of the program are highlighted and discussed.

HEROES: GROWING UP FEMALE & STRONG

Color, 50 minutes, 1/2" video (VHS)
Melpomene Institute (1993)
Level: Teachers, administrators

Heroes focuses on the link between self-esteem and physical activity for adolescent girls. Sharing their stories of four everyday heroes, the documentary explores the benefits of sports on self-esteem, encourages girls to examine their self-image and make choices to improve it. Has guide.

HIGH ENERGY - PHYSICIST MELISSA FRANKLIN

Color, 60 minutes, 1/2" video (VHS)
Films for the Humanities & Sciences (1995)
Level: Junior high, senior high

To Melissa Franklin, building a machine that zaps subatomic particles is as much of a kick as staying up all night listening to Frank Zappa albums. She's an eclectic innovator with a quirky sense of humor-and she's also the first woman to become a tenured professor in Harvard University's physics department. In this profile, Franklin brings the cameras inside the multi-million dollar, 140-ton particle detector at Chicago's Fermilab. The detector, which Franklin helped build, accelerates "the smallest things in the world," subatomic particles, and then smashes them together to produce data that physicists can record and study.

HISTORY REVISITED
Color, 12 minutes, 1/2" video (VHS)
National Women's History Project (1988)
Level: Teachers

Developed by the National Women's History Project, this engaging video demonstrates how easily women's history can be incorporated into various subject areas of the K - 12 curriculum. The video provides strategies and approaches for focusing on women's history. A facilitator's guide accompanies the video.

I IS FOR IMPORTANT
Color, 12 minutes, 16mm film
University of California at Berkeley (1974)
Level: Teacher training, elementary

Sex-role stereotyping in the social interaction of children from kindergarten through eighth grade. Five vignettes (3 minutes each) can be discussed individually.

I'M GLAD I'M A HE, I'M GLAD I'M A SHE
Color, filmstrip/tape
North Carolina Department of Public Instruction
Level: Junior high, senior high

Demonstrates how both men and women are damaged by restricted sex roles, and how they should be free to be themselves without being limited by sex roles.

INEQUITY: A SUBTLE DISASTER
Color, 20 minutes, 1/2" video (VHS)
Indiana University (1988)
Level: Girls and women

Interviews with girls and women provide valuable information about gender inequity. (Slow in placed - preview before using with poorly motivated audiences.)

INEQUITY IN THE CLASSROOM
Color, 28 minutes, 1/2" video (VHS)
Concordia University (1992)
Level: Adult educators, professors, administrators

This video uses student testimonials dramatized learning situations, and comments by experts to provide answers to questions such as: What is inequity in the classroom and how does it manifest itself? What effect does it have on students? How can an inclusive learning environment be created in the classroom?

THE INFINITE POWER OF MATH

Color, 15 minutes, 1/2" video (VHS)
Learning Works (1989)
Level: Grades 4-8

This documentary style video opens student's eyes to the importance of math. The video captures a group of middle grade students engaged in discussion on the role of math in their lives.

INTEGRATING ACADEMIC AND VOCATIONAL STUDIES

Color, 2 hours, 1/2" video (VHS)
National Center for Research in Vocational Education (1989)
Level: Vocational teachers and administration and integration teams

This videotape of a November 1989 teleconference presents the congressional perspective on why the integration concept is significant, discusses relevant research, and explores implementation efforts. (Part 1 is dated information, but Part 2 includes excellent descriptions of various integration models.)

INTERACTIONS FOR SEX EQUITY IN CLASSROOM TEACHING

Color, 27 minutes, 1/2" video (VHS)
The NETWORK, Inc. (not dated)
Level: Teaching training

Presents scenes illustrating teacher bias in the classroom and suggested remediation (for use with the manual Microteaching Skills for Intersect).

INVOLVING KEY PLAYERS IN TECH PREP TELECONFERENCE

Color, 1 1/2 hours, 1/2" video(VHS)
NCRVE (1992)
Level: Teachers, Administrators

The one-and-a-half hour teleconference took place on December 15, 1992. The objective of the teleconference was to share strategies for involving key players in Tech Prep. The teleconference focused on the following questions: "Why is leadership an issue in Tech Prep?"; "How can Tech Prep programs be successfully marketed?"; and "How can business and industry become involved in Tech Prep programs?"

JEWELS IN A TEST TUBE - BIOCHEMIST LYNDA JOHNSON
Color, 60 minutes, 1/2" video (VHS)
Films for the Humanities & Sciences (1995)
Level: Junior high, senior high

This is the story of Lynda Jordan's journey from a teenager growing up in a dangerous, low-income housing project in Boston to a tenured associate professor in Biochemistry. The heart of this profile is to encourage the next generation of African-American Scientists like herself. She talks about the importance of her undergraduate years at an historically black university, a place where she could feel "strong, reinforced, affirmed" in her identity as an African American woman while learning the skills needed to go on to a Ph.D. from MIT and a fellowship at the prestigious Institut Pasteur in Paris.

JUST BETWEEN SISTERS: FUTURES UNLIMITED - MINORITY WOMEN IN TECHNOLOGY
Color, 29 minutes, 1/2" video (VHS)
Consortium for Education Equity, Rutgers (1987)
Level: Senior school, guidance, adult, teacher training

Fast paced and upbeat video features young, determined black and Hispanic women working with pride in the world of technology. Video refutes the stereotypes and fears that many students have concerning nontraditional careers. A positive image is presented to reinforce the challenging, stimulating and rewarding careers. Has user guide.

KILLING US SOFTLY: ADVERTISING'S IMAGE OF WOMEN
Color, 30 minutes, 16 mm film
Cambridge Documentary Films, Inc. (1980)
Level: Senior high, college, adult

Utilizes ads from magazines, newspapers, album covers, etc. to demonstrate images of women. (Also, see Still Killing Us Softly.) Has user's guide.

LIBERATING AMERICA'S SCHOOLS
Color, 60 minutes, 1/2" video (VHS)
Corporation for Educational Radio and Television, PBS (1993)
Level: Adult, teachers, educators

This video takes you to the grass roots level to see school choice programs through the eyes of those who are closest to them: parents, students, teachers, administrators and community activists who have tried "choices" as a means to achieving better schools. Pulitzer Prize-winning columnist Clarence Page takes you into the classroom where choice programs are flourishing. Also included are interviews with two opponents of school choice: Albert Shanker, President of American Federation of Teachers, and Jonathon Kozol, author of *Savage Inequalities*. Has guide.

MAKING POINTS

Color, 11 minutes, 16mm and 1/2" video (VHS)
Direct Cinema Limited (1980)
Level: Senior high, college, adult

Interview with a group of adolescent boys in which their responses about their future career/life plans and choices are actually responses which had been given by a group of adolescent girls. Highlights limitations society places on females.

MAN'S PLACE, A

Color, 43 minutes, 16mm and 1/2" video (VHS)
Institute for Research & Development in Occupational Education (1980)
Level: Senior high, college, adult

Highlights the expanding role of men utilizing a documentary approach. Discussion of dual career couples, parenting, nontraditional occupations and paternity leave.

MATH AND GENDER: ACTIVITIES TO PROMOTE GENDER EQUITY IN MATHEMATICS - TELECONFERENCE - 3 PARTS

Color, 2 hours each, 1/2" video (VHS)
New York State Education Department (1994)
Level: Teachers, counselors, administrators

Lynn Dosch, Family Math and Math Equals trainer and consultant, moderates this series. In session 1, David and Myra Sadker, professors at American University and internationally known lecturers and authors on the topic of gender bias present strategies that can help teachers examine their own stereotypical behavior in the classroom. In session 2, Lynn Mikel Brown, co-author of Meeting at the Crossroads and Elizabeth Debold, co-author of The Mother-Daughter Revolution focus on self-esteem in middle school-aged girls and its relationship to career choice and participation in mathematics. Session 3 examines ways to teach math to encourage all students to take math courses (includes examples of several activities).

MEN: CARING FOR YOUNG CHILDREN

Color, 30 minutes, 1/2" video (VHS)
Cobleskill College of Agriculture and Technology (1993)
Level: Child care teachers, trainers and administrators, Guidance counselors

This video celebrates men who have chosen careers in working with infants, toddlers, preschoolers and young school age children. Through intimate interviews and scenes of men who work with young children, we learn why these men have chosen this challenging career and the satisfaction it offers. **MEN: CARING FOR YOUNG CHILDREN** refutes stereotypes and presents a diverse group of men as they become role models, educators and nurturing professionals who both teach and learn from young children.

MEN AND MASCULINITY - CHANGING ROLES, CHANGING LIVES
Color, 30 minutes, 1/2" video (VHS)
OASIS (1990)
Level: Senior high, adults, post secondary

Live interviews, workshop footage and concert performances recorded at the 13th National Conference on Men and Masculinity. Topics covered include male socialization, counseling batterers to stop domestic violence, campaign to end homophobia, men's studies, men's support groups and workshops, women's involvement in the men's movement, gay and straight men together, class issues and fathering. National Organization for Men Against Sexism, anti-pornography activism, and how men are responding to the challenges of the feminist and gay liberation movements.

MEN TOMORROW
Color, 9 minutes, 1/2" video (VHS)
Colorado Community College and Occupational Education System (1989)
Level: Junior high, senior high, adult, teachers

Men training and working in nontraditional jobs are interviewed about their careers. Suggestions are made on how to investigate and prepare for nontraditional jobs. Recommended for use with males from middle school through adults; also teachers, parents, and employees.

MEN & WOMEN: TALKING TOGETHER
Color, 58 minutes, 1/2" video (VHS)
Mystic Fire Video (1993)
Level: Adult, Post secondary

Deborah Tannen (You Just Don't Understand) and Robert Bly (Iron John) discuss communication between the sexes before a live audience. They field questions from the audience and cover such topics as male/female conversational rituals, the politics of shame, and comforting as a power device.

MEN AND WOMEN WORKING TOGETHER
Color, 18 minutes, 1/2" video (VHS)
Films for the Humanities & Sciences (1990)
Level: Senior high, post secondary, adults

The number of working women, and especially the number of women with family obligations, is dramatically increasing, with no equivalent change in the workplace. This program is devoted to the issues raised by the changing roles of women in the workplace: discrimination based on sex and the legal issues involved, and the more common issues of confusion, resentment, and lack of cooperation and emotional support engendered by the change in the traditional roles of men and women.

MIXED MESSAGES AND THE MEDIA

Color, 30 minutes, 1/2" video (VHS)
PBS (1992)
Level: Junior high, senior high

Images and sounds surround teens. Hear them discuss how they view television, film, and music and how these industries affect them.

MIXED MESSAGES: TEENS TALK ABOUT SEX, ROMANCE, EDUCATION AND WORK

Color, 15 minutes, 1/2" video (VHS)
Educational Equity Concepts (1988)
Level: Senior high, young adult

This video explores the myths and realities facing young people today. This video features teen mothers who have continued their education and participation in nontraditional work programs. Strong inner-city young women speak frankly about their romantic notions, social messages regarding women's and men's roles and about the importance of education and financial independence. Has study guide.

A MODEL FOR GENDER-FAIR COUNSELING

Color, 45 minutes, 1/2" video (VHS)
Indiana Commission on Vocational and Technical Education (1988)
Level: Counselor - secondary and post-secondary

Designed to be used by counselor supervisors and counselors in a wide variety of settings. This videotape may serve as a component for preservice or inservice training programs at secondary, post-secondary or adult levels. Four major sections include an introduction, Explanation of Model for Gender-Fair Counseling, Vignettes and Outcomes. The viewer is encouraged to stop the tape at appropriate points to discuss the material presented or to engage other viewers in role playing or other learning activities. Has users guide.

MORE VOICES, MORE CHOICES: A NEW PERSPECTIVE ON EXPANDING VOCATIONAL CAREER OPTIONS

Color, 16 minutes, 1/2" video (VHS)
Utah State Office of Education (1988)
Level: Junior high, senior high

This video explains how stereotypes limit career exploration and uses role models to respond to common concerns students have about certain occupations. All portrayals are real or dramatizations of real situations in the Salt Lake City area. (Minority representation is limited.) Teacher's guide includes complete transcript and discussion questions.

MYTHBUSTERS II

Color, 15 minutes, 1/2" video (VHS)
New Jersey Career Equity Assistance Center (1993)
Level: Junior high, senior high, adults, parents

Mythbusters II is an exciting and upbeat presentation of nontraditional careers for males and females. It addresses many of the myths which discourage people, young and old, from entering careers dominated by the other gender. Three energetic "Mythbusters" travel through a series of encounters with myths, singing a RAP song called "The Mythbusters RAP." The scenes are realistic and quickly develop rapport with young audiences. Interviews with three role models in the construction trades, pediatric nursing, and architectural drafting communicate a powerful message to students about career choice and satisfaction in doing nontraditional work. Has guide.

MYTHS THAT MAIM

Color, 46 minutes, 1/2" video (VHS)
Encinitas Center for Family and Personal Development (1992)
Level: Teachers, administrators

This image-packed video explores the social construction of gender identities and gender violence, tracing the stories, myths and images of our culture and showing the millennia-old patterns of dominance and subordination that lead to violence and abuse.

A NEW BEGINNING

Color, 9 minutes, 1/2" video, (VHS)
Colorado Community College and Occupational Education System (1989)
Level: Junior high, senior high teachers, parents

Women with nontraditional jobs are interviewed about their work and the support they did or did not receive as they began nontraditional work. Recommended for use with student peers, teachers, parents and employees.

NEW CHOICES...WOMEN IN NONTRADITIONAL CAREERS

Color, 22 minutes, 1/2" video (VHS)
NYC Board of Education, Office of Occupational Education (1990)
Level: High school females, adult re-entry women

In interview format, women discuss challenges and benefits of working in nontraditional careers. Topics include comparisons with traditional clerical jobs and strategies for maintaining "femininity" while earning higher wages.

NEW FRONTIERS FOR EMPLOYMENT

Color, 30 minutes, 1/2" video(VHS)
Honolulu Community College (1994)
Level: Senior high

This video explores nontraditional vocations through rap music, on-camera role models and a brief drama of one women's story. Curriculum guide accompanies video.

NONTRADITIONAL CAREERS

Color, 7 minutes, 1/2" video (VHS)
Careers Unlimited (1995)
Level: Career Counselors, Adult Women

Provides a brief overview of the benefits of nontraditional careers. Focuses mainly on women in nontraditional careers.

NOTHING BUT OPTIONS

Color, 17 minutes, 1/2" video (VHS)
Math/Science Network (1991)
Level: Junior high, Senior high

Profiles five young women in a variety of Math/Science careers including environmental science, electrical engineering, computer graphics, financial investing and computer systems analysis.

ONE FINE DAY

Color, 5 1/2 minutes, 1/2"video (VHS)
Ishtar Films (1984)
Level: All ages

Images of women in history which accompany the anthem to women, "One Fine Day." Written and performed by Kay Weaver. Has user's guide.

ONE WOMAN, ONE VOTE

Color, 120 minutes, 1/2" video (VHS)
PBS (1995)
Level: Junior high, senior high, adults

Witness the seventy-year struggle for woman suffrage-from fledgling alliances to a sophisticated mass movement. From the Seneca Falls Convention in 1848, when Elizabeth Cady Stanton demanded the right for women to vote, to the last battle for passage of the Nineteenth Amendment in 1920, discover why the crusaders faced entrenched opposition from men and women who feared that the women's vote would ignite a social revolution. Has guide.

OUT OF BOUNDS: TEENAGE SEXUAL HARASSMENT

Color, 19 minutes, 1/2" video (VHS)
Coronet/MTI video
Level: Junior high, senior high

This informative program shows us that men often develop their disrespectful and demeaning attitudes during their teen years. This program effectively illustrates examples of sexual harassment among young adults and examines several effective ways to help eliminate it from society. While the program is aimed at teenage boys, girls will benefit from tips on recognizing and handling harassment.

PEER HARASSMENT: HASSLES FOR WOMEN ON CAMPUS

Color, 15 minutes, 1/2" video (VHS)
Center for Women Policy Studies, University of Maryland (1991)
Level: Senior high, college, teachers, administrators

This video shows typical campus incidents involving women students, followed by on-the-scene interviews with the students involved in the experiences.

PUTTING THE PIECES TOGETHER: TECH PREP AND HIGH TECH CAREERS FOR WOMEN - CHANGING CHANNELS IV

Color, 60 minutes, 1/2" video (VHS)
Careers Unlimited (1994)
Level: Senior high, adult

This video was created to show how Tech Prep is connected to high tech and nontraditional careers for women. A teleconference panel consisting of a Tech Prep counselor/coordinator, female nontraditional students, and Missouri Department of Elementary and Secondary Education-Special Vocational Services supervisor answered questions. During the Changing Channels teleconference Putting the Pieces Together, students learned about new and innovative careers for women and how schools are using Tech Prep to help prepare for exciting and challenging careers.

REAL WOMEN DON'T DO MATH . . . OR DO THEY?

Color, 11 minutes, 1/2" video (VHS)
Math/Science Network (1991)
Level: Junior high, Senior high

Tenth grade girls spend three days at a mathematics colloquium which emphasizes the importance of math as a pre-requisite to employable college majors.

REALITY: FRIEND OR FOE?

Color, 20 minutes, 1/2" video (VHS)
Lancaster/Lebanon Tech Prep Consortium and VAP Foundation (1991)
Level: Secondary teachers, administrators, community leaders

This video centers on a fictional faculty meeting called by the Principal to address prospective learning outcomes mandated by the state. But an intruder -- Grim Reality -- insists the group not only address the list of results but genuinely achieve the results themselves. So he has brought some additional participants to the meeting - an employer, a parent, a Vo-tec teacher and a student who is utterly at sea. Immediately, they, along with the Principal and teacher, fall into a cycle of finger pointing and bickering. Reality is able to make them understand that their roles intersect and they are interdependent, they begin to understand one another and to communicate. As they see that Reality is not necessarily grim, the play ends celebrating students who have graduated into productive, satisfying lives.

THE ROAD TO SCHOOL-TO-WORK: A MAP FOR IMPLEMENTATION

Color, 74 minutes, 1/2" video (VHS)
Agency For Instructional Technology (1995)
Level: Educators, administrators, adults

The 74-minute video program introduces the School-to-Work Opportunities Act and takes you inside model School-to-Work Transition programs to see how schools, business, and communities are working together to implement the STWOA. See what successful programs look like and how they function. Listen to educators, business people, community leaders, and students discussing how they are incorporating School-to -Work programs in their schools. The program is divided into six segments, each intended to be viewed separately and followed by group activities. Has guide.

SCHOOL TO WORK TRANSITION: THE EDUCATOR'S ROLE TELECONFERENCE

Color, 60 minutes, 1/2" video (VHS)
NCRVE, University of California @ Berkeley (1994)
Level: Administrators, teachers, counselors

The purpose of this teleconference was to provide educators an orientation to School-to-Work systems. The teleconference provides an overview of School-to-Work systems; discusses models of School-to-Work systems and examines issues and implementation strategies for School-to-Work systems.

SCHOOL TO WORK VIDEO SERIES - 5 IN THE SERIES
Color, 5-10 minutes, 1/2" video (VHS)
Cress Company (1993)
Level: Junior high students, parents

This is a set of 5 brief videos which is geared towards students (and their parents) who are interested in or actually participate in a Tech-prep program. Titles in the series are: School -to-Work Transition, Learning for Earning, Career Cluster Decisions, Developing Individual Partnerships, Career Plan.

SECRETS UNDERGROUND - ARCHAEOLOGIST PATTY JO WATSON
Color, 60 minutes, 1/2" video (VHS)
Films for the Humanities & Sciences (1995)
Level: Junior high, senior high

In this profile, archaeologist Patty Jo Watson follows the path and views of barefoot adventures from 4,500 years ago. Watson's work in caves has uncovered intriguing new information about the earliest North Americans, and has led to a re-evaluation of our beliefs about them. Watson also travels to a rural Chinese village and high into the Rocky Mountains as part of her study of early human activity, and she talks about her provocative new theory about gender roles in early societies. But the key to her work lies deep in the caves of Kentucky and Tennessee, where research can often be hazardous. On one trip in this program a fellow caver collapses in hypoglycemic shock, and Watson and her team must scramble to alert rescue forces and guide them in, two miles underground.

SENDING THE RIGHT SIGNALS
Color, 15 minutes, 1/2" video (VHS)
Project TIDE, Jersey City State College (1990)
Level: Junior high, senior high, adults

This video defines sexual harassment and how it can be handled in school and work settings. Three incidents of sexual harassment are shown and then repeated with corrective measures. Has student manual and training guide.

SEX AND GENDER
Color, 30 minutes, 1/2" video (VHS)
Insight Media (1991)
Level: Adult, Women

This video examines the lives of three women of different generations. It shows how they have been treated differently as women depending upon the generation in which they were raised. The effects of sex ratios and gender-related norms are analyzed. The program investigates sociological perspectives on gender-based social stratification, as well as the social changes that have occurred as a result of the women's movement.

SEX EQUITY IN VOCATIONAL EDUCATION

Color, 18 minutes, 1/2" video (VHS)
Ohio Department of Education, Vocational and Career Education (1988)
Level: Teachers, parent groups, counselors, administrators

As educators we play and important role in shaping the lives and futures of students and have a responsibility to be as sex fair as possible. This video defines terms such as sex-fair, sex discrimination, sex stereotyping, sex fairness and nontraditional students. It suggests strategies on how to provide sex equity in your classroom and environments. Title IX of the Educational Amendments of 1972 and Title II of the Carl Perkins Act of 1984 are explained briefly. A live action video that is useful for teachers, education classes, teacher in-services, counselor in-services and advisory committee meetings.

SEXUAL HARASSMENT 101

Color, 26 minutes, 1/2" video (VHS)
Select Media (1994)
Level: Junior and senior high students

SEXUAL HARASSMENT 101 clearly defines what sexual harassment is and helps young people understand its causes and effects; dispels harmful myths and stereotypes: encourages young women to build alliances; presents strong female role models who expect respectful treatment; provides tools for setting limits and strategies for dealing with harassers.

SEXUAL HARASSMENT IN OUR SCHOOLS

Color, 26 minutes, 1/2" video (VHS)
McGrath Systems (1993)
Level: Community groups, parent organizations

This program has been developed to provide participants with information about: what sexual harassment is; what it looks and feels like; and steps to take to create a sexual harassment -free environment. It also provides initial information about steps to take when instances of sexual harassment occur and how to identify personal behavior which may be perceived as sexual harassment. Accompanied by a leader's guide.

SEXUAL HARASSMENT IN THE SCHOOLS

Color, 16 minutes, 1/2" video (VHS)
Northwest Women's Law Center (1986)
Level: Teachers, counselors, administrators, school personnel, senior high students

Using still shots of photos, this video summarizes the educational titles that address sexual harassment. The tape presents three case studies in detail and outlines the federal guidelines on sexual harassment. Should be previewed.

SEXUAL HARASSMENT: IT'S HURTING PEOPLE

Color, 20 minutes, 1/2" video (VHS)
National Middle School Association (1992)
Level: Junior high, educators, administrators

This video will help students understand the causes and consequences of sexual harassment. Student-to-student harassment is addressed in conjunction with specific instructional strategies for eradicating sexual harassment in your school. A 58-page instructional manual included with the video provides teachers and advisors with activities that reinforce the message of the video. This video is "teacher friendly" and was designed by practicing educators. Has guide.

SEXUAL HARASSMENT: MINIMIZE THE RISK - 3 PARTS (EDUCATOR)

Color, 15 minutes each part, 1/2" video (VHS)
McGrath Systems (1993)
Level: School administrators, teachers, counselors, adults

Sexual Harassment: Minimize the Risk has been developed to assist and guide school districts as they deal with the issues of sexual harassment and abuse in the school setting. It is directed toward several audiences:

- prepare all school employees to understand and take actions when reports of sexual harassment are made to them
- appropriate to use in training investigation team members, complaint managers and administrators to process complaints of sexual harassment
- school board members will need to be aware of these processes to be sure they are followed in their districts

Sexual Harassment: Minimize the Risk is divided into three segments:

- **Part I** defines sexual harassment
- **Part II** presents guidelines for intake and investigation of a sexual harassment incident
- **Part III** tells investigators how to evaluate facts obtained from the investigation, develop recommendations and discipline employees. Accompanied by leader's guide.

Specify Part I, II,or III when ordering.

SEXUAL HARASSMENT ON THE JOB

Color, 28 minutes, 1/2" video (VHS)
Films for the Humanities & Sciences (1990)
Level: Senior high, adult re-entry, adults

This video adapted from a Phil Donahue program explains how to handle sexual harassment in the workplace.

SEXUAL HARASSMENT: PAY ATTENTION! - 2 PARTS (STUDENT)

Color, 45 to 60 minutes, 1/2"video (VHS)
McGrath Systems (1993)
Level: Middle, junior and senior high school, college

This program has been developed to provide participants with information about what sexual harassment is, what it looks and feels like, how to respond to sexual harassment, what to expect when reporting sexual harassment, how to assess personal behavior, consequences of sexual harassment and steps to take to support a sexual harassment free environment. The videos are upbeat, full of music and student culture. Has supplemental materials.

SEXUAL HARASSMENT: WHAT IS IT AND WHY SHOULD I CARE?

Color, 30 minutes, 1/2" video (VHS)
Quality Work Environments (1992)
Level: Senior high, postsecondary, teachers, administrators

This video training program helps our schools take a giant step toward eradicating sexual harassment. The program addresses all manners of sexual harassment in our schools....student to student and teacher to student as well as staff and administration interactions. Has guide.

SHE'S THE ENGINEER

Color, 12 minutes, 1/2" video (VHS)
Cornell University (1992)
Level: Senior high, adult re-entry

A lively video of women talking about careers that incorporate math and science education. Designed by Cornell University as a recruiting project to encourage high school students, both men and women, to consider engineering as a profession and to demonstrate that women do belong in engineering.

SHE WANTS TO BE AN ENGINEER

Color, 27 minutes, 1/2" video (VHS)
W.E.S.T. @ New Jersey Institute of Technology (1993)
Level: High school and adult re-entry women interested in engineering, science and technology

Highlights the New Jersey Institute of Technology Women in Engineering science and Technology (W.E.S.T.) program. Panel of women in science and technology discuss their experience and/or careers in the field. Other people involved in W.E.S.T. programs in Middlesex County, NJ, share their personal stories of how they got involved in the math, science and technology area.

SHORTCHANGING GIRLS, SHORTCHANGING AMERICA

Color, 15 minutes, 1/2" video (VHS)
AAUW (1991)
Level: Teachers, parent groups, counselors, administrators, educators, all adults

Clearly underscores the need for major changes in the ways girls are taught and treated in schools. Includes AAUW poll results, interviews with education experts, narratives by public policy leaders, along with compelling voices and faces of American girls.

SILICON VISION: COMPUTATIONAL NEUROSCIENTIST MISHA MAHOWALD

Color, 60 minutes, 1/2" video (VHS)
Films for the Humanities & Sciences (1995)
Level: Junior high, senior high

As a child, Misha Mahowald went on a ride at Disneyland where visitors were "shrunk down" into "water molecules." Being only a child, she thought what she was seeing was real. Today, Mahowald brings the same delighted curiosity to her work as a young scientist in a very young filed, computational neuroscience, a combination of computer science and biology. Although she is only 29 years old, she has already played a major part in the development of a silicon retina, a tiny computer chip that reacts to light as the eye's retina does.

SKILLS TO WORK: THE VIDEO

Color, 10 minutes, 1/2" video (VHS)
Orange-Ulster BOCES (1994)
Level: Senior high, adult re-entry, service providers

This video will help people, Orange County residents in general, be more informed about the opportunities available in nontraditional work.

STALE ROLES & TIGHT BUNS

Color, 29 minutes, 1/2" video (VHS)
O.A.S.I.S. (1986)
Level: Senior high, adults

Presents a selection of images of men found in consumer advertising. Through these, we see the myths used to define and limit the American man. The programs' powerful visual and emotional impact generates new insights and a refreshed view of both men and advertising. Stimulates people to widen their views about the roles of men. It asks the viewer to examine our definition of "real men" and to think critically about the pressures that shape these ideals.

STICKS, STONES AND STEREOTYPES

Color, 26 minutes, 1/2" video (VHS)
Equity Institute (1988)
Level: Senior high

This powerful bilingual video focuses on homophobic, racial and ethnic slurs and the anguish they cause. It examines why young people participate in name-calling and most importantly, what they can do to stop it.

STILL KILLING US SOFTLY

Color, 30 minutes, 1/2" video (VHS) and 16mm
Cambridge Documentary Films, Inc. (1987)
Level: Senior high, college, adult

Utilizes ads from magazines, newspapers, album covers, etc. to demonstrate images of women. (Updated version of Killing Us Softly.)

SUBTLE SEXUAL HARASSMENT: THE ISSUE IS RESPECT

Color, 28 minutes each, 1/2"video (VHS)
Quality Media Resources (1992)
Level: Adults, administrators

This video defines and explains sexual harassment as a power issue. Good vignettes with up-to-date and realistic examples of sexual harassment in the work place. Also explains the legal differences between quid pro quo harassment and hostile environment harassment.

SUBTLE SEXUAL HARASSMENT: MANAGEMENT'S NEW RESPONSIBILITY

Color, 29 minutes, 1/2"video (VHS)
Quality Media Resources (1992)
Level: Adults, school administrators

This video is about the operational inefficiency and liability to business when sexual harassment occurs. Discusses management's responsibility to recognize, deter, and to conduct a skilled investigation of all complaints regarding sexual harassment. Explains why the company is at risk anytime the employee sexualizes the workplace.

TAKE THE POWER

Color, 6 1/2 minutes, 1/2" video (VHS)
Ishtar Films (1990)
Level: All ages

Take the Power is the sequel to the award-winning One Fine Day. This multicultural celebration validates the work, the progress, and the vision of today's women.

TAKE THIS JOB AND KEEP IT

Color, 17 minutes, 1/2" video (VHS)
New York State Department of Education (1990)
Level: Junior high, Home & Career Skills students, senior high

Take This Job and Keep It is a compilation of live action skits and vignettes with star hosts. Designed for use in programs that prepare young people for employment, this video demonstrates that several skills, including teamwork, are necessary for success in any job. Accompanying materials expand on the motivational message; participant activity pages are provided in both English and Spanish.

TECH PREP PLANNING FOR THE 21ST CENTURY

Color, 12 minutes, 1/2" video (VHS)
Curriculum Publications Clearinghouse (1991)
Level: Junior high, senior high, postsecondary

Tech Prep is a new education reform initiative which involves academic and vocational staff at both the secondary and postsecondary level. This introductory videotape gives an overview about Tech Prep and information about the roles of key players.

TEENAGERS AND SEX ROLES

Color, 30 minutes, 1/2" video (VHS)
PBS (1992)
Level: Junior high, senior high

Men and women of all ages are struggling with the changing roles of masculine and feminine behavior. This dynamic and emotion-charged program examines how today's teenagers see their future roles in our changing society.

TEEN AWARENESS/ SEXUAL HARASSMENT: WHAT IT IS AND WHAT TO DO

Color, 22 minutes, 1/2" video (VHS)
New Day Films (1992)
Level: Junior high, senior high, teachers, administrators

This video intended for school administrators and teachers as a primer on sexual harassment for use in the classroom. Focusing on student-to-student harassment, this program helps teenagers understand what constitutes sexual harassment and provides ways to address this burgeoning problem.

TUNING INTO SEXUAL HARASSMENT

Color, 14 minutes, 1/2" video (VHS)
New Dimension Media (1994)
Level: Junior high, middle school

This video designed to increase middle school students awareness of the problem of sexual harassment in schools. It presents realistic dramatizations of sexual harassment occurring between boys and girls at school. Interviews raise important issues while allowing the classroom viewer to hear from both parties involved and their peers. Behaviors depicted in the scenarios will sensitize students to the fact that may behaviors that occur every day are examples of sexual harassment. In addition to helping pre-teens recognize harassing behaviors in others, this video challenges young people to think about whether their behaviors could be perceived as sexual harassment. Has guide.

WARNING: THE MEDIA MAY BE HAZARDOUS TO YOUR HEALTH

Color, 36 minutes, 1/2" video (VHS)
Media Watch, California (1990)
Level: Senior high, postsecondary, adults

This video exposes the dangers of media models that glamorize violence, fear, and hatred between the sexes. It can be shown to everyone from high school students to business executives to help reduce the problems of racism and sexism in our society.

WHAT IS A NONTRADITIONAL CAREER?

Color, 15 minutes, 1/2" video (VHS)
Region IV Education Service Center (1990)
Level: Senior high, adult

This video explains what a nontraditional career is and how it is obtainable for both men and women.

WE ALL COUNT IN FAMILY MATH

Color, 17 minutes, 1/2" video (VHS)
Equals, Lawrence Hall of Science, Berkeley, CA (1984)
Level: Elementary teachers, parents, parent groups

This video is about the 1981 FAMILY MATH program developed by Equals in California. It shows several scenes from Family Math classes and the kinds of activities parents and children can do together. The idea of families enjoying math activities at home together has become so popular that Family Math classes are catching on all over the world. Although the program is geared towards the elementary level, the program's purpose can be adapted to any age or grade level. **Family Math** text complements the video. (Please request text when ordering video.)

WOMEN GET READY

Color, 10 minutes, 1/2" video (VHS)
Illinois State Board of Education (1990)
Level: Junior high, senior high

Young women have a multitude of career opportunities from which to choose. Expectations from family, peers, and society in general have often placed them, and young men too, into gender-stereotyped boxes which can limit many of their life choices. This video was designed to help young people break out of these boxes so they can make decisions based on personal values, feelings, abilities, interests, and aptitudes, as well as life style and job market realities, that are not limited by sex-role stereotyping and gender bias.

WOMEN GET THE VOTE

Black & White, 25 minutes, 1/2" video(VHS)
National Women's History Project, CRM McGraw-Hill Films (1962)
Level: Junior High, Senior High, Adult

Lively, informative an enjoyable overview of the 19th century women's rights movement and the implacable opposition it faced. A youthful Walter Cronkite narrates this historic "news" program, combining thoughtful analysis with marvelous film footage. The program also features several on-screen interviews with women who played a role in the long suffrage campaign, providing a first-person account of the historical events depicted.

WOMEN IN SCIENCE LESSON #8 -- SCIENTIFIC CAREERS FOR WOMEN: DOORS TO THE FUTURE

Color, 39 minutes, 1/2" video (VHS)
University of Michigan (1988)
Level: Secondary students, parents, teachers, counselors

This video (one of an eight-part series) encourages women to pursue careers in science and examines some of the barriers which they may face.

WOMEN SEEN ON TELEVISION

Color, 10 minutes, 1/2" video (VHS)
Letting Go Foundation (1991)
Level: Junior high, senior high, adults

This video blends narration, clips of broadcast footage, and rock music into a fact paced, critical look at television's stereotypical view of women. Some segments include women as sex objects; the male voice of authority; women as victims of violence; and women being "fixed up."

A WORD IN EDGEWISE
Color, 26 minutes, 1/2" video (VHS)
Women Make Movies (1988)
Level: College students, adults

Historical perspective on language shows how biased language affects our perceptions and promotes inequality between the sexes.

WORKFORCE 2000
Color, 10 minutes, 1/2" video (VHS)
Colorado Community College and Occupational Education System (1989)
Level: Junior high, teachers, parents

A robot RB5X leads students through an introduction to technology, nontraditional options and career choice. Recommended for use with middle school students also teachers and parents.

YOU CAN BE A SCIENTIST, TOO
Color, 13 minutes, 1/2" video (VHS)
National Women's History Project (1992)
Level: Elementary level, junior high

This short video about careers in science was filmed on location with elementary school children. Girls and boys see that their "why" and "what if" questions are the same kinds of questions scientists ask, and that childhood interests and activities can lead to future careers. Classroom scenes are interwoven with biographical sketches of some of the women written about in the *American Women in Science* biographies.

YOUR FUTURE: CAREERS FOR THE 21st CENTURY - SHIFTING GEARS
Color, 12 minutes, 1/2" video (VHS)
Salem-Keizer Public Schools, Oregon (1989)
Level: Senior high, parents, teachers

Parents, administrators and professionals discuss skills that are important to students in choosing career options with focus on nontraditional training and jobs. Designed to be used with the following career exploration tapes:

Automobiles (9 minutes), Child Care (7 minutes), Construction (7 minutes), Electronics (7 minutes), Office Systems (9 minutes)

SUBJECT LISTING OF MEDIA

Career Development Planning/Career Education

Are You Ready? A Documentary Video About Career Planning for Youth
Black Women on the Move
Breaking Out: Career Choices for Teen-age Parents
Breaking the Cycle
Career Choices in Vocational Education: Is This Job For Me?
Career Planning for Youth - Golden Rule Network
Catching a Wave to the Future
Changing Channels: High Tech Careers for Women - Curriculum and Video Series (Laser Technology, Drafting and Computers, Electronics and Robotics, Aviation and Avionics)
Changing Channels Travels the Information Highway
Choices
Choices in Health: Personal Career Decisions
Computer Equity Expert Project
Connecting the Past with the Future: Women in Mathematics and Science - Part one Mary Somerville
Connecting the Past with the Future: Women in Mathematics and Science - Part Two - Florence Bascom
Connecting the Past with the Future: Women in Mathematics and Science - Part Three Maria Goeppert-Mayer
DNA Detective - Molecular Biologist Lydia Villa-Komaroff
Dreams of Flying
Earth Explorer - Geophsicist Marcia McNutt
Engineering: A Career for Women
The Equity Game
Focus for Action: National Career Development Guidelines
Follow Your Dream
Futures^2 Series (Advanced Transportation, Animal Care, Environmental Science & Technology, Fitness and Physical Performance, Future Habitats, Graphic Design, Industrial Design, Mass Communication, Meteorology, Ocean Exploration, Personal Communication, Renewable Energy)
Futures: From High School to High Tech
Getting Ready
Girls Can!
Girls, Science and Mathematics
Go For It! (Alaska)
Go For It: Personal Career Decisions
High Energy - Physicist Melissa Franklin

Career Development Planning/Career Education continued

Jewels in a Test Tube - Biochemist Lynda Johnson
Just Between Sisters: Futures Unlimited III (Minority Women in Technology)
Men Tomorrow
More Voices, More Choices
Mythbusters II
A New Beginning
New Choices...Women in Nontraditional Careers
New Frontiers for Employment
Nontraditional Careers
Nothing But Options
Putting the Pieces Together: Tech Prep and High Tech Careers for Women
School to Work Transition: The Educator's Role Teleconference
School to Work Video Series
Secrets Underground: Archaeologist Patty Jo Watson
She's the Engineer
She Wants to Be An Engineer
Silicon Vision: Computational Neuroscientist Misha Mahowald
Skills to Work: The Video
Stereotyping and the World of Work
Take This Job and Keep It
Tech Prep Planning for the 21st Century
What Is A Nontraditional Career?
Women Get Ready
Women in Science Lesson # 8
Women Seen on Television
You Can Be A Scientist, Too
Your Future: Careers for the 21st Century (Automobiles, Child Care, Construction, Electronics, Office Systems)

Child Care

Breaking Stereotypes: Teens Talk About Raising Children
Men: Caring for Young Children
A New Beginning

Cultural Diversity

Bias Awareness in a Multicultural World
Black Women on the Move
A Class Divided
Sticks, Stones and Stereotypes
Time for Justice
A Word in Edgewise

Education

Breaking the Silence: Equity and Effectiveness in College Teaching
Chemists in the Classroom
A Class Divided
Dreamworlds
Equity in Education: Gender Bias in the College Classroom
Failing at Fairness
Focus for Action: National Career Development Guidelines
Girls, Science and Mathematics
Heroes: Growing Up Female & Strong
I'm Glad I'm A He, I'm A She
Inequity: A Subtle Disaster
Inequity in the Classroom
Integrating Academic and Vocational Studies
Interactions for Sex Equity in Classroom Teaching
Involving Key Players in Tech Prep Teleconference
Liberating America's Schools
Making Points
The Road to School-To-Work: A Map for Implementation
Sex Equity in Vocational Education
Shortchanging Girls, Shortchanging America
Tech Prep Planning for the 21st Century

Math & Science

Connecting the Past with the Future: Women in Mathematics and Science - Part One Mary Somerville
Connecting the Past with the Future: Women in Mathematics and Science - Part Two - Florence Bascom
Connecting the Past with the Future: Women in Mathematics and Science - Part Three Maria Goeppert-Mayer
DNA Detective - Molecular Biologist Lydia Villa-Komaroff
Earth Explorer - Geophysicist Marcia McNutt
Girls, Science and Mathematics
High energy - Physicist Melissa Franklin
Jewels in a Test Tube - Biochemist Lynda Johnson
Nothing But Options
Secrets Underground - Archaeologist Patty Jo Watson
She's the Engineer
She Wants to Be An Engineer
Silicon Vision: Computational Neuroscientist Misha Mahowald
Women in Science Lesson # 8
You Can Be A Scientist, Too

Men

Another Half
Making Points
A Man's Place
Men: Caring for Young Children
Men and Masculinity - Changing Roles, Changing Lives
Men and Women: Talking Together
Men and Women Working Together
Stale Roles & Tight Buns

Nontraditional

Black Women on the Move
Breaking the Cycle
Career Choices in Vocational Education: Is This Job For Me?
Catching a Wave to the Future
Changing Courses: A Second Chance
Changing Channels: High Tech Careers for Women - Curriculum and Video Series (Laser Technology, Drafting and Computers, Electronics and Robotics, Aviation and Avionics)
Changing Channels Travels the Information Highway
Choices
Connecting The Past With The Future - Women in Math and Science
Dreams of Flying
Engineering: A Career for Women
The Equity Game
Follow Your Dream
Futures^2 Series (Advanced Transportation, Animal Care, Environmental Science &Technology, Fitness and Physical Performance, Future Habitats, Graphic Design, Industrial Design, Mass Communication, Meteorology, Ocean Exploration, Personal Communication, Renewable Energy)
Futures: From High School to High Tech
Gender Show
Getting Ready
Go For It! (Alaska)
Guide to Non-traditional Training for Women
History Revisited
Just Between Sisters: Futures Unlimited III (Minority Women in Technology)
Killing Us Softly: Advertising Images of Women
Making Points
A Man's Place
Men: Caring for Young Children
Men Tomorrow

Nontraditional contintued

Mixed Messages: Teens Talk About Sex, Romance, Education and Work
More Voices, More Choices
Mythbusters II
A New Beginning
New Choices...Women in Nontraditional Careers
New Frontiers for Employment
Nothing But Options
One Fine Day
Real Women Don't Do Math...Or Do They?
She's the Engineer
She Wants to Be An Engineer
Still Killing Us Softly
Take the Power
What Is A Nontraditional Career?
Women Get Ready
Women in Science Lesson # 8
A Word in Edgewise
Workforce 2000
You Can Be A Scientist, Too
Your Future: Careers for the 21st Century (Automobiles, Child Care, Construction, Electronics, Office Systems)

Pregnant & Parenting Teens

Breaking Out: Career Choices for Teen-age Parents
Breaking Stereotypes: Teens Talk About Raising Children
Mixed Messages: Teen Talk about Sex, Romance, Education and Work
Mythbusters II

Sex Role Stereotyping

Bias Awareness in a Multicultural World
Breaking Stereotypes: Teens Talk About Raising Children
Breaking the Silence: Equity and Effectiveness in College Teaching
A Class Divided
Equity in Education: Gender Bias in the College Classroom
Fairer Sex
Gender: The Enduring Paradox
Gender Show
Gender Socialization
Girls Can!

Sex Role Stereotyping continued

I is For Important
I'm Glad I'm A He, I'm A She
Inequity: A Subtle Disaster
Inequity in the Classroom
Interactions for Sex Equity in Classroom Teaching
Killing Us Softly: Advertising Images of Women
Making Points
Men and Women Working Together
Mixed Messages and the Media
A Model for Gender-Fair Counseling
Mythbusters II
Myths That Maim
Sex and Gender
Sex Equity in Vocational Education
Stale Roles & Tight Buns
Sticks, Stones and Stereotypes
Stereotyping and the World of Work
Still Killing Us Softly
Teenagers and Sex Roles
Warning the Media May Be Hazardous to Your Health
Women Seen on Television
A Word in Edgewise

Sexual Harassment

Coarsework: Confronting Sexual Harassment
Crossing the Line
Out of Bounds: Teenage Sexual Harassment
Peer Harassment: Hassles for Women on Campus
Sending the Right Signals
Sexual Harassment 101
Sexual Harassment in the Schools
Sexual Harassment in our Schools
Sexual Harassment: It's Hurting People
Sexual Harassment on the Job
Sexual Harassment - Minimize the Risk
Sexual Harassment - Pay Attention
Sexual Harassment: What is it and Why Should I Care?
Subtle Sexual Harassment: The Issue is Respect
Subtle Sexual Harassment: Management's New Responsibility

Sexual Harassment continued

Teen Awareness/Sexual Harassment
Turning into Sexual Harassment
Warning the Media May Be Hazardous to Your Health
Women Seen on Television

Staff Development

Bias Awareness in a Multicultural World
Breaking the Silence: Equity and Effectiveness in College Teaching
A Class Divided
Dreamworlds
Equity in Education: Gender Bias in the College Classroom
Fairer Sex
Gender: The Enduring Paradox
Heroes: Growing Up Female & Strong
I is For Important
Inequity in the Classroom
Integrating Academic and Vocational Studies
Interactions for Sex Equity in Classroom Teaching
Involving Key Players in Tech Prep Teleconference
Liberating America's Schools
Making Points
Men & Women: Talking Together
A Model for Gender-Fair Counseling
One women, One Vote
Reality: Friend or Foe?
The Road to School-To-Work: A Map for Implementation
Sex and Gender
Sexual Harassment: It's Hurting People
Shortchanging Girls, Shortchanging America
Women Get The Vote

Women's History

Dreams of Equality
History Revisited
One Fine Day
One Woman, One Vote
Take the Power
Women Get the Vote
You Can Be A Scientist, Too

Work & Family

Men and Women Working Together

ADDRESS LIST

School-to-Work Partnerships
Tech-Prep Consortiums
New York State Teacher Centers

New York State School-to-Work Advisory Council Members

Jean Stevens
(Co-Chair)
Assistant Commissioner
NYS Education Department
Room 319 ED
Albany, NY 12234

Margarita Mayo
(Co-Chair)
Director of Quality Education & Training
The Business Council of NYS, Inc.
152 Washington Avenue
Albany, NY 12210

(Note: Members listed in alphabetical order)

Jane Bernhard
First Vice President
NYS Congress of Parents and Teachers
119 Washington Avenue
Albany, NY 12210-2284

Bonnie Berry
Representing NYS School Administration
Association
Principal
Primary Building School
17 School Street
Peru, NY 12972

Tony Bifaro
Assistant to the President
NYS United Teachers
159 Wolf Road
Albany, NY 12212-5008

Frank Carucci
VP for Vocational High Schools
United Federation of Teachers
260 Park Avenue South
New York, NY 10010

Renee Chow
Student Representative
36 Holmesdale Road
Albany, NY 12203

Jane Cleaver
Executive Director
PIC of Chautauqua, Inc.
P.O. Box 3358
Jamestown, NY 14702-3358
Alternate: Isabelle Andrews or Jan Hennessy, NYATEP

Paul F. Cole
Secretary-Treasurer
NYS AFL-CIO
100 South Swan Street
Albany, NY 12210-1939
Alternate: Robert Lieberman

Charles Cook, Senator
Chairman, Standing Committee on
Education
NYS Senate
Room 512 LOB
Albany, NY 12247
Alternate: Lois Wilson or Peter Applebee

Antonia Cortese
First Vice President
NYS Curriculum/Assessment Council
NYS United Teachers
PO Box 15-008
159 Wolf Road
Albany, NY 12212-5008
Alternate: Alice Brody

James Dillon
Executive Deputy Commissioner
NYS Department of Labor
Building #12 - Room 592
State Office Campus
Albany, NY 12240
Alternate: Susan Harris
Director of School-to-Work Program

Burt L. Donahue
GM Co-Director
UAW/GM Center for Human Resources
4222 Genesee Street
Cheektowaga, NY 14225

Marion Elliot
Director, Area 6
NYS School Boards Association
RD#1, Box 3
Fort Covington, NY 12937
Alternate: Karen McSharry

Joseph Farinola
District Superintendent
Monroe 1 BOCES
41 O'Connor Road
Fairport, NY 14450

Steven Feldman
Director, School-to-Work
NYC Board of Education
110 Livingston Street - Room 832
Brooklyn, NY 12210
Alternate: Florence Jackson

Geoffrey Flynn
Sr. Program Associate for Education
Governor's Office
Executive Chamber, State Capital
Albany, NY 12224
Alternate: Don Ross
Governor's Counsel's Office

Stanley Hansen, Jr.
Chief, Bureau of College, School and
Community Collaboration
NYS Education Department
965 EBA
Albany, NY 12234
Alternate: David Bowers

Jack Hickey
Representing Council of Supervisors and
Administrators of the City of New York
7 South Court
Scotia, NY 12302
Alternate: Frank Landro

John R. Madden
Senior Vice President, Human Resources
Fleet Bank
69 State Street
Albany, NY 12207

Denise May
Educational Consultant
KEDC
Eastman Kodak Company
343 State Street
Rochester, NY 14650-0811

R. Gaynor McCown
Vice President
Education and Workforce Development
NYC Partnership and Chamber of
Commerce
One Battery Park Plaza
New York, NY 10004-1479
Alternate: Tom Pendleton

John Mogulescu
Dean, Office of Academic Affairs
the City University of New York
535 East 80th Street
New York, NY 10021

David Nohara
School-to-Work Coordinator
Office of Academic Programs
SUNY Systems Administration
SUNY Plaza, Room S302
Albany, NY 12246

Gary Olsen
Director of Governmental Affairs
General Building Contractors of NYS
6 Airline Drive
Albany, NY 12205

David A. Paciencia
Representing NYS Council of School
Superintendents
Superintendent
South Jefferson Central School
PO Box 10
Adams, NY 13605

Ann Pope
New York African-American Research
Foundation
State University of New York
State University Plaza, Room N502
Albany, NY 12246

Sonya Shapiro
Division of Adult and Continuing Education
Rockland BOCES
65 Parrott Road
West Nyack, NY 10994
Alternate: Jane Schulman
LaGuardia Community College

Thomas Thorpe
Youth Employment Program Specialist 3
NYS Division for Youth
Capitol View Office Park
52 Washington Street
Rensselaer, NY 12144
Alternate: Jon Tonsoni

Victor Tosi
Executive Director
NYS Job Training Partnership Council
State Office Campus
Building 12, room 238
Albany, NY 12240
Alternate: Cathy Reardon

Larry Waite
Office of Vocational and Educational
Services for Individual with Disabilities
(VESID)
One Commerce Plaza, Room 1624
Albany, NY 12230
Alternate: Nancy Lauria

Ruezalia Watkins
United Parents Association
837 Putnum Avenue
Brooklyn, NY 11221

Harvey Weisenberg
Assemblyman
New York State Assembly
Legislative Office Building
Room 619
Albany, NY 12248
Alternate: Steve August, Executive Director
Commission on Skills Development and
Career Education

STATE EDUCATION DEPARTMENT SCHOOL-TO-WORK TEAM

Team Members:

Maureen Adriance

Joseph Bimka

Constance Carroll

Robert DeFabio

Stephen Hill

Sara Knower

Walter LeBaron

Barbara Martinage

Ann Mattei

Patricia O'Neil

Bert Smith

Office of Workforce Preparation
& Continuing Education
EB 305M, 89 Washington Avenue
Albany, New York 12234
518-474-3302

SCHOOL-TO-WORK STATEWIDE PROVIDERS

(Note: Providers are listed in alphabetical order by agency)

Ms. Jean Knapper
Bronx Community College
NYS Career Counselor Training
West 181st Street and University Avenue
Bronx, NY 10453

Dr. Craig Flood
Career Options Institute
6 British American Blvd.
Suite G
Latham, NY 12110-1402

Mr. Thomas Golden
Cornell University
ILR Program
105 ILR Extension, Garden Avenue
Ithaca, NY 14853-3901

Ms. Jane Schulman
LaGuardia Community College
NYS Career Counselor Training Center
31-10 Thomson Avenue
Long Island City, NY 11101

Mr. Nelson Ronsvalle
NAPE-NY, Inc.
Rural Urban Center, R204
208 Broadway Street
Montour Falls, NY 14865

Ms. Jan Hennessy
NYATEP
111 Pine Street, 2nd Floor
Albany, NY 12207

NYS Teacher Centers
c/o NYS Education Department
Room 379, EBA
89 Washington Avenue
Albany, NY 12230

Mr. David Nohara
SUNY Systems Administration
Office of Community Colleges
Sate University Plaza, Room T701B
Albany, NY 12246

Mr. Scott Shablak
Syracuse University
Office of Professional Development
Administration Building
Syracuse, NY 13244-1100

Ms. Constance H. Spohn
Two-Year College Development Center
University at Albany
135 Western Avenue, Husted 208
Albany, NY 12222

Ms. Nancy Lauria
VESID
One Commerce Plaza
Albany, NY 12234

SCHOOL-TO-WORK PARTNERSHIP LIST
CONTACT INFORMATION

James Calnon
Adirondack STW Consortium
Private Industry Council
185 Margaret Street
Plattsburgh, NY 12901
518-561-4295

Terry Swett
Albany STW Partnership
Albany Adult Learning Center
27 Western Avenue
Albany, NY 12203
518-462-7292

Diane Wilson
Arts-Related Industry Partnership
YALA
320 East 96th Street
New York, NY 10128
212-348-7006

Sundra Franklin
Bronx High Schools/CSD #9/FEGS
Queens High Schools/CSD #27/FEGS
510 Avenue of the Americas, 2nd Floor
New York, NY 10011
212-366-8135

Cynthia Nwizu
Brooklyn STW Partnership
NYC Technical College
300 Jay Street, M500
Brooklyn, NY 11201
718-260-5754

Jane Ervolino
Buffalo STW Partnership
Curriculum, Evaluation & Development
229 Floss Avenue
Buffalo, NY 14212
716-897-8135

Karen Brown
Capital Regional STW Partnership
Capital Region BOCES
6 British Boulevard
Latham, NY 12110
518-786-9124

Robert Bone
Cayuga-Onondaga Regional Part. for STW
Cayuga-Onondaga BOCES
5980 South Street Road
Auburn, NY 13021
315-253-0361

Dean Edwina Hamby
Central Brooklyn STC Opportunities Part.
Medgar Evers College
101 West 31st Street, 12th Floor
New York, NY 10001
212-290-5760

Nancy Blake
Chemung-Schuyler-Steuben STW Part.
Schuyler-Chemung-Tioga BOCES
459 Philo Road
Elmira, NY 14903
607-739-3581

Bonnie Calzolaio
Cortland Co. Education & Business Alliance
Cortland Chamber of Commerce
34 Tompkins Street
Cortland, NY 13045
607-756-4592

Darra Lewis
Delaware-Chenango-Otsego Local Part.
Delaware-Chenango BOCES
RR #3, Box 307, East River Road
Norwich, NY 13815
607-335-127

Kathy Heffron
Eastern Monroe C. School-Business Part.
Monroe #1 BOCES
41 O'Connor Road
Fairport, NY 14450
716-383-2257

Robyn Govan
F.E.G.S.
510 6th Avenue, 2nd Floor
New York, NY 10011
212-366-8135

Sylvia Connolly
Finger Lakes STW Consortium
Wayne-Finger Lakes BOCES
3501 County Road 20
Stanley, NY 14561
716-526-6456

Robert Durkin
14th Street Union Square/Grammercy Park
Washington Irving High School
40 Irving Place
New York, NY 10003
212-674-5000

John Ames
Fredonia Community-School WF Coalition
Fredonia CSD
425 East Main Street
Fredonia, NY 14063
716-679-1581

Al Nilsen
Future Force 2000
c/o Staten Island Botanical Garden
1000 Richmond Terrace
Staten Island, NY 10301
718-273-8200 Ext. 19

Greta Gregory
Greater Salamanca STW Partnership
Salamanca CSD
50 Iroquois Drive
Salamanca, NY 14779
716-945-2400 Ext. 433

Alanna Smith
Hudson Valley STW Alliance
Orange-Ulster BOCES Vo-Tech Center
53 Gibson Road
Goshen, NY 10924-9777
914-284-2245

Jack Boak
Jefferson-Lewis STW Partnership
Jefferson-Lewis BOCES
20104 NYS Route 3
Watertown, NY 13601
315-788-0400

Frances Flood
Long Island STC Partnership
Eastern Suffolk BOCES
350 Martha Avenue
Bellport, NY 11713
516-286-6730

Stephanie Twin
Lower East Side STW Opportunities Part.
485 13th Street
Brooklyn, NY 11215
718-499-1058

Terryl Donovan
Manhattan STC Consortium
Office of Manhattan High School Supt.
122 Amsterdam Avenue, Room 330
New York, NY 10023
212-501-1116

Donald Ginsberg
Metro Rochester STW Transition
Rochester City School District
131 West Broad Street
Rochester, NY 14614
716-262-8389

Kathleen Clemente
Mohawk Valley WFP System Consortium
Oneida-Herkimer-Madison BOCES
4747 Middle Settlement Road, Box 70
New Hartford, NY 13413
315-793-8684

Bonnie Marmor/Gene Silverman
Nassau County STC Partnership
Nassau BOCES
Valentines Road & The Plain Road
Westbury, NY 11590
516-997-8700

Ted Hennessy
New Learning Opportunities Part.
Questar III
1943 Brookview Road
Castleton, NY 12033
518-732-7266

Tom Pendleton
New York Citywide STW Alliance
Literacy Assistance Center
84 Williams Street, 14th Floor
New York, NY 10038
212-803-3360

Sheila Smith
Niagara Regional STW Consortium
Niagara County Community College
3111 Suanders Settlement Road
Sanborn, NY 14132
716-731-3271 Ext. 456

Marcia Drumm
Onondaga Co. STC Local Partnership
Onondaga Community College
4941 Onondaga Road
Syracuse, NY 13215
315-469-2400

Wenonah Kemp
Opportunity Plus
Cornell of Coop. Ext. of Saratoga County
50 W. High Street
Ballston Spa, NY 12020
518-885-8995

Jill Bennett
Oswego County WFP Partnership
Workforce Preparation Partnership
PO Box 541
Fulton, NY 13069
315-598-7810

Dr. Dorrie Williams
Queens STW Opportunities Initiative
LaGuardia CC
31-10 Thomson Avenue
Building M, Room 202B
Long Island City, NY 11101

Joan Kruegler
Riverfront STW Partnership
Hudson Valley Community College
80 Vandenburgh Avenue, HRC 501
Troy, NY 12180
518-270-1549

Sylvia Thomson
Rochester-Monroe County STW Part.
Monroe Community College
1000 East Henrietta Road
Rochester, NY 14623
716-292-2135

Tom Tiktin
Rockland County STW Partnership
Rockland County BOCES Tech Center
65 Parrott Road
W. Nyack, NY 10994
914-623-3412

Melissa Minnick
Schenectady County STW Part.
Schenectay County Business Foundation for
Quality Education, Inc.
306 State Street
Schenectady, NY 12305
518-372-5656

Candace Huber
So. Chautauqua County STW Consortium
School & Business Alliance
Erie #2 BOCES - Route 394
Ashville, NY 14710-9675
716-763-1801

Michael Brenner
Southeast Nassau WFP System Consortium
Plainedge High School
Wyngate Drive
No. Massaqequa, NY 11758
516-797-4460

Pat McKeown
St. Lawrence-Lewis STW Part.
Office of Educational Partnership
PO Box 349
Potsdam, NY 13676
315-267-3333

Ruth Henneman
STW Part. of Broome & Tioga Counties
Broome-Tioga BOCES
435 Glenwood Road
Binghamton, NY 13905
607-763-3654

Frank San Felice
STW Partnership of Dutchess BOCES
Dutchess County BOCES
578 Salt Point Turnpike
Pougkeepsie, NY 12601-6599
914-486-4800

Kathy Meckle
Sullivan County STW Partnership
c/o Sullivan County BOCES
85 Ferndale-Loomis Road
Liberty, NY 12754
914-292-7900

Betty Powers
The GLOW STW Partnership
Park Lewis Hall
Richmond Avenue
Batavia, NY 14020
716-344-5721

Peggy McKiernan
Tompkins-Seneca-Tioga STW Part.
Tompkins-Cortland CC
170 North Street, PO Box 139
Dryden, NY 13053-0139
607-844-8211

Nancy Olsen-Lynch
Ulster County STW Partnership
301 Development Court
Kingston, NY 12401
914-339-0593

Ruth Richards
Westchester/Putnam STW Part.
Putnam-N. Westchester BOCES
200 BOCES Drive
Yorktown Heights, NY 10598
914-248-2452

Patricia Anderson
Western NY Regional STW Partnership
Erie #1 BOCES
Clifford Crook Center
355 Harlem Road
West Seneca, NY 14224
716-821-7085

Deborah Levitzky
Workward Bound
The NYC Outward Bound Center
140 West Street, Suite 2626
New York, NY 10007
212-608-8899

Robert Hassinger/Sal Mancini
Yonkers STW Partnership
Yonkers Public Schools
1061 N. Broadway
Yonkers, NY 10701
914-376-8600

New York State Education Department Tech Prep Contacts

Bernard McInerney
NYS Education Department
Room 317 Education Building
89 Washington Avenue
Albany, NY 12234
518-474-4157

Ann Marie Haase
NYS Education Department
Room 1071, EBA
89 Washington Avenue
Albany, NY 12234
518-474-5313

New York State Tech Prep Technical Assistance Centers

Jack Fabozzi
Two-Year College Development Center
University at Albany
135 Western Avenue, Husted 208
Albany , NY 12222
518-442-5590

Stan Brodsky
Case/CUNY Graduate School
33 W. 42nd Street
New York, NY 10036
212-719-2488

SUNY College of Technology at Alfred
James Blizzard
5910 Densmore Rd.
Lavonia, NY 14487
(phone) 607-587-3106
(fax) 607-587-3120
(e-mail) BLIZZAJP@alfredtech.edu
Sec. Contact: David Dronsick
(phone) 607-587-4262
(fax) 607-587-3293
(e-mail) DRONSID@alfredtech.edu

Bronx Community College
Joanettia Grier
Butler Hall, Rm. 304
W 181 St. & University Ave.
Bronx, NY 10453
(phone) 718-289-5227/6
(fax) 718-289-6031
Sec. Contact: Dr. Reid Strieby
(phone) 718-289-5227/6
(fax) 718-289-6031

Broome Community College
Ruth A. Henneman
Broome-Tioga BOCES
435 Glenwood Rd.
Binghamton, NY 13905
(phone) 607-763-3315
(fax) 607-763-3224
(e-mail) rhennema@BTBOCES.steir.org
Sec. Contact: Ginny Amato
PO Box 1017, Upper Front Street
Binghamton, NY 13902
(phone) 607-778-5337
(fax) 607-778-5676
(e-mail) Amato_V.edu.broom

Cattaraugus-Allegany BOCES
Larry Sorokes
1825 Windfall Road
Olean, NY 14760
(phone) 716-372-8293 (ext. 288)
(fax) 716-373-2801

SUNY College of Agriculture and Technology at Cobleskill
Terry Hughes
Curtis Mott, Rm. 107
Cobleskill, NY 12043
(phone) 518-234-5571
(fax) 518-234-6025
(e-mail)HUGHESTR@cobleskill.edu
Sec. Contact: Dr. MacDonald Holmes
(phone) 518-234-5523
(fax) 518-234-5333
(e-mail) HOLMESMJ@cobleskill.edu
Web Site: www.cobleskill.edu

Corning Community College
Gus Rossi, Director
1 Academic Drive
Corning, NY 14870-3297
(phone) 607-962-9278
(fax) 607-962-9485

SUNY College of Technology at Delhi
Nancy Macdonald
316 Bush Hall
Delhi, NY 13753
(phone) 607-746-4617
(fax) 607-746-4368
(e-mail)
MacdonNR@SNYDELAB.delhi.edu
Sec. Contact: Margaret Buel
(phone) 607-746-4615
(fax) 607-746-4368
Web Site: http://www.delhi.edu

SUNY College of Technology at Morrisville
Mark Bailey
112 Charlton Hall
Morrisville, NY 13408
(phone) 315-684-6462
(fax) 315-684-6591
(e-mail) BaileyMP@morrisville.edu
Sec. Contact: Joanne Pratt
(phone) 315-684-6010
(fax) 315-684-6591

Dutchess/Ulster Tech Prep Project
Ellen Wolf
RR #1, Box 383F
Hensonville, NY 12439
(phone) 518-734-4716
(fax) 518-734-4352
(e-mail) Wolf@capital.net
Sec. Contact: Andrew Verdon
(phone) 914-486-4840x3014
(fax) 914-486-4832

Eastern Suffolk BOCES
John Volonts
350 Martha Ave.
Bellport, NY 11713
(phone) 516-286-6580
(fax) 516-286-6588
(e-mail)JVOLONTS@sricboces.org
Web Site: www.techprep.org
Sec. Contact: Wayne Snell
(phone) 516-286-6577
(fax) 516-286-6588

Erie I BOCES
Jerald Wolfgang
Clifford N. Crooks Service Center
WNY Regional Ed. Ctr. For Economic Dev.
355 Harlem Road
West Seneca, NY 14224
(phone) 716-821-7185
(fax) 716-821-7290
(e-mail) jwolfgan@erie.wnyric.org
Sec. Contact: Kristen Mulcahy (Sandarelli)
(phone) 716-821-7196
(fax) 716-821-7290
(e-mail) kmulcahy@erie.wnyric.org

Fashion Institute of Technology
Joan Stern/Bonnie Johnson
Seventh Ave. & 27th St., Rm. B903
New York, NY 10001-5992
(phone) 212-217-7932
(fax) 212-217-7593
Sec. Contact: Kirk Garrett (Admin. Asst.)

Finger Lakes Community College
Rebecca Gamba
4355 Lake Shore Drive
Canandaigua, NY 14424-8395
(phone) 716-394-3500 (ext. 420)
(fax) 716-394-8518
(e-mail) gambare@snyflcc.fingerlakes.edu
Web Site: http://www.duality.com/techprep

Genesee Community College
Jennifer Wolfley
NYS School for the Blind, Park Lewis Bldg.
Richmond Avenue
Batavia, NY 14020
(phone) 716-344-5619
(fax) 716-345-1907
Sec. Contact: Sue Scutella

Monroe Community College
Anne Shannon
1000 E. Henrietta Road
Rochester, NY 14623
(phone) 716-292-2177
(fax) 716-427-2749
(e-mail) shannon@mccvm.is.monroecc.edu
Sec. Contact: Sylvia Thomson
(phone) 716-292-2135
(fax) 716-427-2749
(e-mail) thomson@mccvm.is.monroecc.edu

Mount Vernon City School District
Ralph Tedesco/Pat Lyon
100 California Road
Mount Vernon, NY 10552
(phone) 914-665-5264
(fax) 914-665-5358
(e-mail) FASN58A@prodigy

Nassau BOCES
Mary Mirabito
Valentines & The Plains Roads
Westbury, NY 11590
(phone) 516-997-8700 (ext. 2383)
(fax) 516-997-8742
Sec. Contact: Matt Levy, Sharon Douglas
(phone) 516-997-8700 (ext. 2385)

NYC Board of Education
Leonard Ciaccio
College of Staten Island
2700 Victory Blvd.
Bldg. 1A, Rm. 401
Staten Island, NY 10314
(phone) 718-982-2325
(fax) 718-982-2432
Sec. Contact: Peter M. Takvorian, Ph.D.
Coord. Medical-Technonogy
Tottenville High School-NYC Board of Ed.
100 Luten Avenue
Staten Island, NY 10312
(phone) 718-356-2220-x223
(fax) 718-317-0962
Sec. Contact: Dr. Margaret Bresnan
Director, Learn Program
NYC Board of Ed. 439 West 49th St.
NY, NY
(phone) 212-399-3502
(fax) 212-399-3499

NYC Technical College
Anne Gawkins
300 Jay St., Rm. N105
Brooklyn, NY 11201-2983
(phone) 718-260-5207
(fax) 718-260-5503
(e-mail) AGawkins@cuny.campus.mci.net
Sec. Contact: Mike Frenkel
(phone) 718-260-5461
(fax) 718-260-5503
(e-mail) MFWriter@aol.com

Niagara County Community College
John Craig
3111 Saunders Settlement Road
Sanborn, NY 14132
(phone) 716-731-6222 (ext. 412)
(fax) 716-731-2761
(e-mail) RUGMAR128@aol.com
Sec. Contact: Linda Warren
(phone) 716-731-6222x700
(fax) 716-731-2761

Oneida-Madison BOCES
Mary Farrell (Interim)
4747 Middlesettlement Road
New Hartford, NY 13413-0070
(phone) 315-793-8616
(fax) 315-793-8544

Onondaga Community College
Marcia Drumm
4941 Onondaga Rd.
Syracuse, NY 13215-2099
(phone) 315-469-2952
(fax) 315-469-2589
(e-mail) drummm.aurora.sunyocc.edu
Sec. Contact: Joy Stanistreet
(phone) 315-469-2503
(fax) 315-469-2589
(e-mail) stanis@aurora.sunyocc.edu

Orange County Community College
John Hoffman
115 South Street
Middletown, NY 10940
(phone) 914-341-4712
(fax) 914-344-2254
(e-mail) jhoffman@mail.sunyorange.edu
Sec. Contact: Lynne Sheren
(phone) 914-341-4585
(fax) 914-343-1228
(e-mail) sherenoccc@aol.com

Putnam-Northern Westchester BOCES
Ruth F. Richards
200 BOCES Drive
Yorktown Heights, NY 10598-4399
(phone) 914-248-2452
(fax) 914-962-4787
Sec. Contact: Maria Morgan
or
Southern Westchester BOCES
Joseph S. Schwartzberg
Richard Lerer Tech Center
65 Grasslands Rd.
Valhalla, NY 10595
(phone) 914-761-3400
(fax) 914-761-8099

Queensborough Community College
Victor Maiorana
222-05 56th Ave.
Bayside, NY 11364
(phone) 718-631-6315
(fax) 718-281-5004
(e-mail) Home - VPMAYO@aol.com
Sec. Contact: Mary Anne Meyer
(phone) 718-281-5004
(fax) 718-281-5004

St. Lawrence-Lewis BOCES
Patricia McKeown
Coordinator of Educational Partnerships
PO Box 349
Potsdam, NY 13676
(phone) 315-267-3333
(fax) 315-267-3334
(e-mail) PMCK123@aol.com
Sec. Contact: Pamela Whittet
(phone) 315-386-4504
(fax) 315-386-3395
(e-mail) PWhittet@mum.neric.org

Syracuse City School District
Lena Kochian
Henninger H.S.
600 Robinson St.
Syracuse, NY 13206
(phone) 315-435-6555
(fax) 315-435-5899
(e-mail)pmacee@freeside.scsd.k12.ny.us

Tompkins-Cortland Community College
Peggy McKernan
170 North St., Route 13
Dryden, NY 13053
(phone) 607-844-8211 (ext.4328)
(fax) 607-844-9665

Two-Year College Development Center
Constance H. Spohn
University at Albany
Husted 208, 135 Western Avenue
Albany, NY 12222
(phone) 518-442-5590
(fax) 518-442-9055
(e-mail) CS785@cnsibm.albany.edu
Sec. Contact: John Fabozzi

Western Suffolk BOCES
Angela Lacara
L.A. Wilson Tech, Div. of Occ. Ed.
17 Westminster Avenue
Dix Hills, NY 11746
(phone) 516-667-6000 (ext. 375)
(fax) 516-667-1519

Yonkers City School District
Bernard Pierorazio
Saunders Trade & Tech
183 Palmer Rd.
Yonkers, NY 10701
(phone) 914-376-8150
(fax) 914-376-8154

New York State Teachers Centers
(Note: Teacher Centers are listed in alphabetical order.)

Isabel Pickett
NYS Education Department
Room 467-EBA
Albany, NY 12234
Phone: 518-473-1234

Debbie Stout
Adirondack Teacher Center
PO Box 327-Park Visitor Interpretive
Paul Smiths, NY 12970
Phone: 518-327-5012

Judy Eckert
Alden Teacher Center
13190 Park Street
Alden, NY 14004
Phone: 716-937-9116

Karla Lomangino
Baldwin Teacher Center
Baldwin High-842 Ethel T. Kloberg Dr.
Baldwin, NY 11510
Phone: 516-377-9224

Brian Messier/Pat Wistort
Bedford Staff Development Center
West Patent Elementary-West Patent Road
Bedford Hills, NY 10507
Phone: 914-241-6116

Linda Miller
BEPT Teacher Center Consortium
Pelham High School-Colonial Avenue
Pelham, NY 10803
Phone: 914-738-7352

Adrienne Forbes
BOCES/CHHOP Teacher Center
PN Westchester BOCES-200 BOCES Drive
Yorktown Hts., NY 10598
Phone: 914-248-2344

Geraldine Brophy
Brentwood Teacher Center
Wisconsin Avenue
Brentwood, NY 11717
Phone: 516-434-2101

Janet Gibbons
Brighton Teacher Center
Brighton High School-1150 Winton Road S.
Rochester, NY 14618
Phone: 716-242-5199

Louise Casey
Broome County, The Teacher Center
23 Jackson Avenue
Endicott, NY 13760
Phone: 607-786-8532

Carol Bauda/Shirley Banko
Buffalo Teacher Center
85 Military Road
Buffalo, NY 14207
Phone: 716-871-6078

Mary Ann Luciano
Catskill Regional Teacher Center
Bugbee Hall, Rm 211-State Univ. College
Oneonta, NY 13820
Phone: 607-436-3920

Phyllis Grau
Cattaraugus-Allegany Teacher Center
210 East Elm Street
Olean, NY 14760
Phone: 716-372-1862

Victoria Shepardson
Cayuga Onondaga Teacher Center
Genesee Mall-100 Genesee Street
Auburn, NY 13021
Phone: 315-258-5665

Janet Jury
Center State Teacher Center
OMH BOCES-Box 70, Middle Settlement Road
New Hartford, NY 13413-0070
Phone: 315-793-8532

Patty Galimi
Central New York Teaching Center
4860 Onondaga Road
Syracuse, NY 13215
Phone: 315-492-4896

Valorie Catalano
Chautauqua County Teachers Center
Lincoln School Rm 220-301 Front Street
Jamestown, NY 14701
Phone: 716-483-3270

Sandra Hanzlian
Cheektowaga, The Teacher Center of
777 Maryvale Drive, Room 159
Cheektowaga, NY 14225
Phone: 716-632-1042

Bonnie Calzolaio
Cortland-Homer Teacher Center
Barry School-20 Raymond Avenue
Cortland, NY 13045
Phone: 607-753-8508

Vacant
Dryden Teachers Center
Dryden Elementary School - P.O. Box 88
Dryden, NY 13053
Phone: 607-844-3053

Roellyn Armstrong
East Meadow Teacher Center
East Meadow HS-101 Carman Avenue
East Meadow, NY 11554
Phone: 516-794-1827

Paula Acunto
East Ramapo Teacher Center
461 Viola Road
Spring Valley, NY 10977
Phone: 914-577-6375

Katherine DeLaMata
East Williston Teacher Center
Wheatley School-11 Bacon Road
Old Westbury, NY 11568
Phone: 516-876-8726

Michael Scalzo
Endicott Educational Resource Ctr.
101 Loder Avenue
Endicott, NY 13760
Phone: 607-748-9039

Jane Ruff
Erie I Inst. for Prof. Advancement
1EEC-1050 Maryvale Drive
Cheektowaga, NY 14225
Phone: 716-630-4204

Barbara Steinfeldt
Erie-Catt Teacher Center
3340 Baker Road
Orchard Park, NY 14127
Phone: 716-662-0135

Shelley Kirshenbaum
Farmingdale TRACT
Howitt MS-VanCott /Grant Avenues Rm 306
Farmingdale, NY 11735
Phone: 516-752-6560

Norman Rosenbaum
Freeport Teacher Center
50 S. Brookside Avenue
Freeport, NY 11520
Phone: 516-867-5385

Gary Hofmann
Genesee Region Teacher Center
Buffalo Street
Alexander, NY 14005
Phone: 716-591-7450

Kathy Walter
Great Neck Teacher Center
North Middle School-77 Polo Road
Great Neck, NY 11023
Phone: 516-773-1763

Stuart Horn
Greater Capital Region TC
1580 Columbia Turnpike
Castleton, NY 12033
Phone: 518-479-4083

Tim O. Mains
Greece Teaching & Learning Center
Prof. Development Ctr-1790 Latta Rd.
Rochester, NY 14612
Phone: 716-621-1000 ext. 3010

Angelo Chiarelli
Hempstead TRCTC
Hempstead High School-Teacher Center
Hempstead, NY 11550
Phone: 516-292-7077

Mike Klopfer
Herricks Teacher Center
999 Herricks Road
New Hyde Park, NY 11040
Phone: 516-248-3137

Patrick Peterson
Holland-Patent Teaching & Learning
Middle School
Holland Patent, NY 13354
Phone: 315-865-8152 ext. 226

Vacant
Hudson River Regional Teacher Ctr.
c/o Peekskill High School-1072 Elm St.
Peekskill, NY 10566
Phone: 914-737-3766

Ann Pry
Huntington Teacher Center
P.O. Box 1500-140 Woodhull Road
Huntington, NY 11743
Phone: 516-673-3002

Mary Ann Augusta
Intercounty Teacher Center
NYIT-Building 66 Room 225
Central Islip, NY 11722
Phone: 516-348-3317

Carol Woodruff
Islips, Staff Development Ctr. of
East Islip School SDCI-87 West Main St.
East Islip, NY 11730
Phone: 516-224-1285

Vacant
Jamesville DeWitt/Syraucse Univ. TC
c/o Jamesville DeWitt MS-Randall Road
Jamesville, NY 13078
Phone: 315-445-8350 ext. 367

Mary Sutton
Jefferson Lewis Teacher Center
171 East Hoard Street
Watertown, NY 13601
Phone: 315-785-9143

Dan Hendery
Johnson City Teacher Center
Johnson Central Schools-666 Reynolds Rd.
Johnson City, NY 13790
Phone: 607-763-1262

Sam Alaimo
Kenmore Staff Development Center
3200 Elmwood Ave-Sheridan School, Rm 205
Kenmore, NY 14217-1174
Phone: 716-874-8505

Mary Lou Fernandes
Lackawanna Teacher Center
Franklin School-146 Franklin Street
Lackawanna, NY 14128
Phone:

Mary Ellen Molloy
Levittown Teacher Center
Memorial Education Buidling-Abbey Lane
Levittown, NY 11756
Phone: 516-520-8300 ext. 671

Carin Attas
Malverne Teachers' Center
Malverne High School-80 Ocean Avenue
Malverne, NY 11565
Phone: 516-596-2096

Sheila Filipowski
Mamaroneck, Teacher Institute of
Mamaroneck UFSD
1000 W Boston Rost Rd
Mamaroneck, NY 10543
Phone: 914-381-1748

Joie Hinden
Manhasset Teacher Resource Center
200 Memorial Place
Manhasset, NY 11030
Phone: 516-627-8038

Jean LaMarca
Massapequa Teacher Center
McKenna School-Spruce Street
Massapequa Park, NY 11762
Phone: 516-797-6045

Kathy Corbett
Mid East Suffolk Teacher Center
970 North Griffing Avenue
Riverhead, NY 11901
Phone: 516-369-9010

Lynn Sarda
Mid-Hudson Teacher Center
Old Main Building, Rm 212-SUNY New Paltz
New Paltz, NY 12561-2442
Phone: 914-257-2885

Ed Rinaldo
Mid-State Teacher Resource Center
Madison Oneida BOCES
PO Box 168 Spring Rd.
Verona, NY 13478
Phone: 315-361-5555

Robert Russo
Middle Country Teacher Center
14 43rd Street
Centereach, NY 11720
Phone: 516-738-2808

Janice Nappo
Middletown Teacher Center
20 Orchard Street
Middletown, NY 10940
Phone: 914-343-3143

Joyce Cristiano
Mohawk Regional Teacher Center
Herkimer BOCES-400 Gros Boulevard
Herkimer, NY 13350
Phone: 315-867-2097

Lea Levin
Monroe #1 BOCES Teacher Center
41 O'Connor Road-Foreman Center
Fairport, NY 14450
Phone: 716-383-6478

Etta Schneiderman/Barry Beerman
Nassau TRACT Teacher Center
10 Armstrong Road
Garden City Pk., NY 11040
Phone: 516-248-7760

Joan Palmer
New Hartford Teacher Center
Oxford Road School
New Hartford, NY 13413
Phone: 315-738-9201

Davida Sappol/Hannie Corten
New Rochelle Staff Resource Center
New Rochelle High School-265 Clove Road
New Rochelle, NY 10801
Phone: 914-576-4594

Aminda Gentile
New York City TC Consortium
48 East 21st Street, 10th Floor
New York, NY 10010
Phone: 212-475-3737

John Wolner
Newburgh Teacher Center
220 West Street
Newburgh, NY 12550
Phone: 914-563-7394

Dolores Marino
Niagara Falls Teacher Center
561 Portage Road-South Junior Building
Niagara Falls, NY 14301
Phone: 716-282-6593

Suzanne G. Weinstein
North Bellmore Teacher Center
Dinkelmeyer School-Waltoffer Avenue
North Bellmore, NY 11710
Phone: 516-679-8094

Diane Bonenfant
North Country Teacher Resource Ctr.
Sibley Hall, Room 322-State Univ College
Plattsburgh, NY 12901
Phone: 518-564-5000

Robert LaRoche
Northern Westchester Putnam TC
North Salem School-230 June Road
North Salem, NY 10560
Phone: 914-669-5414

Stella Blasenheim
Nyack Staff Development Center
13-A Dickinson Avenue
Nyack, NY 10960
Phone: 914-353-7060

Gerald Gambardella
Oceanside Teacher Center
Oceanside UFSD-145 Merle Avenue
Oceanside, NY 11572
Phone: 516-678-7598

Vacant
Orleans Niagara Teacher Center
Kenan Site-195 Beattie Avenue
Lockport, NY 14094
Phone: 716-439-4331

Carol Axner
Ossining Staff Development Center
Claremont School-Claremont Road
Ossining, NY 10562
Phone:914-762-7181

Marcia Burrell
Oswego County Teacher Ctr
179 County Route 64
Mexico, NY 13114
Phone: 315-963-4356

Charlotte Galluccio
OWL Teacher Center at Lindenhurst
350 Daniel Street
Lindenhurst, NY 11757
Phone: 516-226-2772

Larrilee Capps-Jemiola
Peconic Teacher Center
141 Narrow Lane
Southampton, NY 11968
Phone: 516-283-6800 ext. 262

Leta Taraban Relin
Penfield Staff Development Center
Penfield High School-High School Drive
Penfield, NY 14526
Phone: 716-248-3000 ext. 350

Amelia Thomson/Claudia Cerasani
Pioneer Teacher Center
PO Box 619
Yorkshire, NY 14173
Phone: 716-492-4066

Ruth Hollis
Pittsford Teacher Center
431 Thornell Rd.-Thornell Rd. Elementary
Pittsford, NY 14534
Phone: 716-385-8671

Barbara Ralph
Plainedge Teacher Center
Plainedge High School-Wyngate & Peony Dr
N. Massapequa, NY 11758
Phone: 516-797-4491

Norma Ziegel
Port Washington Teacher Center
Carrie Palmer Weber MS-99 Campus Drive
Port Washington, NY 11050
Phone: 516-883-4037

Susan Cook
Purchase College, Teacher Center at
Natural Sciences Building, Room 1
Purchase, NY 10577
Phone: 914-251-6876

Anne Turner
Remsen Teacher Center
9733 Main Street-PO Box #406
Remsen, NY 13438
Phone: 315-831-5397

Marcy Greenspan
Rochester Teacher Center
Franklin High School-950 Norton Street
Rochester, NY 14621
Phone: 716-266-0006

Debra Thomas
Rockland Teachers' Center
65 Chapel Street
Garnerville, NY 10923
Phone: 914-942-2513

Nicholas DeCicco
Rockville Centre Teacher Center
128 Shepherd Street
Rockville Centre, NY 11570
Phone: 516-255-8812

Louis Campola
Rome Teacher Center
Marine Midland Bldg - 199 Liberty Plaza
Rome, NY 13440
Phone: 315-339-4433

Gloria Daini
Roslyn Teacher Center
Roslyn High School-Round Hill Road
Roslyn, NY 11576
Phone: 516-625-6584

Betty Shea
Rush Henrietta Teacher Center
Rush Henrietta Schs.-2000 Lehigh Sta Rd
Henrietta, NY 14467
Phone: 716-359-5570

Ellen Burke
Sachem Teacher Center
212 Smith Road
Lake Ronkonkoma, NY 11779
Phone: 516-467-5482

Judith Schwartz
Scarsdale Teachers Institute
Brewster Road
Scarsdale, NY 10583
Phone: 914-721-2580

Vacant
Schuyler Chemung Tioga/Corning TC
459 Philo Road
Elmira, NY 14903
Phone: 607-739-3581

Rose Ambrosino/Joan Pisano
Smithtown Teacher Center
26 New York Avenue
Smithtown, NY 11787
Phone: 516-361-2552

Sue Peters
South Country Teacher Center
35 Bellport MS-Kreamer Street
Bellport, NY 11713
Phone: 516-286-5719

Joyce O. Lewis
S. Huntington Parent Teacher Center
Walt Whitman HS-301 West Hills Road
Huntington Sta., NY 11746
Phone: 516-425-5489

Thomas McKeever
Southern Tier School/Community Network
Haverling HS - 25 Ellas Avenue
Bath, NY 14810
Phone: 607-776-1632

Marcella Fugle
Southown Teachers Center
123 Union Street
Hamburg, NY 14075
Phone: 716-649-6775

Linda Dunning
St. Law.Valley Teachers' Learning Center
PO Box 231-139 State Street
Canton, NY 13617
Phone: 315-386-4504

Kate Hymes/Russell Stahl
Sullivan County Teacher Center
85 Ferndale Loomis Road
Liberty, NY 12754-9780
Phone: 914-292-0082

Lisa LaBrake
Sweet Home Betty Summers Teacher Ctr.
Sweet Home Schools - 1901 Sweet Home Rd.
Amherst, NY 14228
Phone: 716-689-5223

Barry Borakove
Syosset TRACT Center
H.B. Thompson MS-Ann Drive, Room 228
Syosset, NY 11791
Phone: 516-364-5770

Anne Marie Voutsinas
Syracuse Teacher Center
501 Park Street
Syracuse, NY 13203
Phone: 315-435-4217

John Jones
Tioga County Teacher Center
36 Talcott Street
Owego, NY 13827
Phone: 607-687-6227

Joanne McCartin
Tonawanda/Grand Island TC
202 Broad Street
Tonawanda, NY 14150
Phone: 716-695-6172

Doug Beers
Tri-County Teacher Center
Lackawanna Avenue
Mount Morris, NY 14510
Phone: 716-658-7900

Vacant
Utica Teacher Center
John F. Hughes School-Prospect Street
Utica, NY 13501
Phone: 315-792-2277

Albert O. Arnone
Valley Stream Teacher Resource Ctr
Memorial Jr. High School-Fletcher Avenue
Valley Stream, NY 11582
Phone: 516-561-1492

Dianne Herrick
Victor Teaching Center
953 High Street
Victor, NY 14564
Phone: 716-924-3252 ext. 414

Richard Froelich/Patrick Gallagher
Wantagh Seaford Teacher Center
Wantagh Middle School-Beltagh Avenue
Wantagh, NY 11793
Phone: 516-679-6404

Sarah Carey
Waterloo Teacher Center
Lafayette Middle School-Inslu Street
Waterloo, NY 13165
Phone: 315-539-5454

Dan LaFica
Wayne Finger Lakes Teacher Center
131 Drumlin Court-Eisenhower Building
Newark, NY 14513-1863
Phone: 315-332-7272

Rosanne Nelson
Webster Teacher Center
Webster School District-875 Ridge Road
Webster, NY 14580
Phone: 716-671-1880 ext. 370

Gwen Yarger-Kane
West Genesee/Syracuse Univ TC
Camillus MS-5525 Ike Dixon Road
Camillus, NY 13031
Phone: 315-672-3183

Meryl Hanley
W Irondequoit Teaching/Learning
2400 Oakview Drive
Rochester, NY 14617
Phone: 716-336-3144

Debbie Staszak
West Seneca Teacher Center
1397 Orchard Park Road
West Seneca, NY 14224
Phone: 716-675-4429

Edith Winthrop
Westchester Teacher Center
457 Hartsdale Avenue
Hartsdale, NY 10530
Phone: 914-948-8037

Mary Cappasso
Western Hamptons, Teacher Center of
Westhampton Beach MS-Oneck Lane
Westhampton, NY 11978
Phone: 516-288-3800

Jane Lombardo
Western Suffolk Teacher Center
762 Deer Park Road
Dix Hills, NY 11746
Phone: 516-254-0107

Kathy Button
Wheatland-Chili Teacher Center
13 Beckwith Avenue
Scottsville, NY 14546
Phone: 716-889-6285

Cynthia Adams
White Plains Teacher Center
White Plains Staff Devel. Ctr.-500 N. St
White Plains, NY 10605
Phone: 914-422-2438

Carole Gehrig
Whitesboro Teacher Center
9469 Maynard Drive
Marcy, NY 13403
Phone: 315-735-6217

Karen D'Esposito
William Floyd Teacher Center
225 Montauk Highway, Suite 221
Moriches, NY 11955
Phone: 516-878-2266

David Adelizi
Williamsville Education Center
151 Paradise Road, Room 207
East Amherst, NY 14051
Phone: 716-626-8450

Rita Seligman
Yonkers, R. Gazzola Teacher Ctr of
1061 North Broadway
Yonkers, NY 10703
Phone: 914-376-8614

CAREER INFORMATION AND PARENTS PROJECTS

The purpose of these projects is to provide middle school parents/guardians with information to guide their children through the process of making informed career and course decisions.

Career Information and Parents
Angela Prestigiacomo
Greater Capital District Tech Prep
Consortium
Two-Year College Development Center
135 Western Avenue, Husted 208
Albany, New York 12222
518-442-5590

Family Connections
Carol Gallo
South Western Tech Prep Consortium
Cattaraugus-Allegany-Erie-Wyoming
BOCES
1825 Windfall Road
Olean, New York 14760
716-372-8293 ext. 288

The Future Is Yours
Anne Shannon
Monroe County Tech Prep Consortium
Monroe County Community College
1000 East Henrietta Road
Rochester, New York 14623
716-292-2177

**PICOP (Parent Information/
Career Options Project)**
Mary Ann Luciano
Tech Prep of South Central New York
Catskill Regional Teachers Center
Bugbee Hall, Room 211
State University College
Oneonta, New York 13820
607-436-3920

The Parent Project
Kay Clements
Oneida-Herkimer-Madison BOCES
P.O. Box 70
Middlesettlement Road
New Hartford, New York 13413-0070
315-793-8684

Skills for the Workplace of Tomorrow
Joy Stanistreet
Central New York Tech Prep Consortium
Onondaga Community College
4941 Onondaga Road
Syracuse, New York 13215
315-469-2502

NYS Tech Prep Middle School Career Development Cadre Leaders

Joanettia E. Grier
Bronx CC
University Ave. @ West St.
Bronx, NY 10453
Phone: 718-289-5226

Ginny Amato
Broome CC
PO Box 1017
Binghamton, NY 13902
Phone: 607-778-5337

Larry Sorokes
Cattaraugus-Allegany BOCES
1825 Windfall Road
Olean, NY 14760-9299
Phone: 716-372-8293, ext. 288

Ellen Wolf
Dutchess BOCES
350 Dutchess Turnpike, BETA Bldg.
Poughkeepsie, NY 12603
Phone: 518-734-4716

John Volonts
Eastern Suffolk BOCES
350 Martha Ave., Brookhaven Tech
Bellport, NY 11773
Phone: 516-286-6580

Jerald Wolfgang
Erie 1 BOCES
355 Harlem Road
West Seneca, NY 14224
Phone: 716-821-7196

Rebecca Gamba
Finger Lakes Community College
4355 Lake Shore Drive
Canandaigua, NY 14424-8395
Phone: 716-394-3500

Anne Shannon
Monroe CC
1000 East Henrietta Road
Rochester, NY 14623
Phone: 716-292-2177

Mary Mirabito
Nassau BOCES
718 The Plain Road
Westbury, NY 11590
Phone: 516-997-8700, ext. 2383

Linda Silverman
NYC Technical College
300 Jay Street, Room N105
Brooklyn, NY 11201-2983
Phone: 718-260-5730

John Craig
Niagara CCC
3111 Saunders Settlement Road
Sanborn, NY 14132
Phone: 716-731-3271, ext. 412

Pauline Rogers
Oneida-Herkimer-Madison BOCES
PO Box 70, Middlesettlement Road
New Hartford, NY 13413
Phone: 315-793-8616

Marsha Drum
Onondaga CC
4941 Onondaga Road, Rt. 137
Syracuse, NY 13215-2099
Phone: 315-469-2952

Lynn Sheren
Orange CCC
115 South Street
Middletown, NY 10940
Phone: 914-341-4585

Mary Anne Meyer
Queensborough CC
222-05 56th Avenue, Rm. H456
Bayside, NY 11364-1497
Phone: 718-281-5004

James Blizzard
SUNY Alfred
College of Technology
Alfred, NY 14802
Phone: 607-587-3106

Nancy McDonald or Mary Ann Luciano
SUNY Delhi
Bugbee Hall
Oneonta, NY 13820-4015
Phone: 607-746-4615

Lena Kochian
Syracuse CSD
600 Robinson Street
Syracuse, NY 13210
Phone: 315-435-4811

Connie Spohn or Stephanie Stewart
Two Year College Development Center
Husted 208, 135 Western Avenue
Albany, NY 12222
Phone: 518-442-5590

Angela Lacara
Western Suffolk BOCES
30 Billmore Ave. Extension
Oakdale, NY 11769
Phone: 516-667-6000, ext. 375

Career Related Web Sites

The Black Collegian Online - http://www.black-collegian.com

Career City - http://www.careercity.com

Career Magazine - http://www.careermag.com

Career Mosaic - http//:www.careermosaic.com

Career Paradise of Emory University - http://www.emory.edu/CAREER

Career Path - http://www.careerpath.com

Career Resource Center - http://www.careers.org

College Edge - http://www.collegeedge.com

Job Web (National Association of Colleges and Employers) - http://www.jobweb.com

Lycos Top 5% Career Related Sites - http://point.lycos.com/topics/Careers_Overall.html

Monster Board - http://www.monster.com

New York State Department of Labor - http://www.labor.state.ny.us
  New York State Department of Labor Job and Career Resources -
  http://www.labor.state.ny.us/dolemp.htm

Occupational Outlook Handbook - http://stats.bls.gov/ocohome.htm

Online Career Center - http://occ.com

The Riley Guide - http://www.dbm.com/jobguide

Student Center - http://www.studentcenter.com

Tops Jobs - http://www.topjobsusa.com

US Department of Labor - http://www.dol.gov

US News Colleges and Careers Center - http://www.usnews.com/usnews/edu

What Color Is Your Parachute: Job Hunting Online -
  http://www.washingtonpost.com/parachute